

# EXHIBIT A

**IEEE 100**  
**The Authoritative Dictionary of**  
**IEEE Standards Terms**

**Seventh Edition**



Published by  
Standards Information Network  
IEEE Press

**Trademarks and disclaimers**

*IEEE believes the information in this publication is accurate as of its publication date; such information is subject to change without notice. IEEE is not responsible for any inadvertent errors.*

*Other tradenames and trademarks in this document are those of their respective owners.*

*The Institute of Electrical and Electronics Engineering, Inc.  
3 Park Avenue, New York, NY, 10016-5997, USA*

*Copyright © 2000 by the Institute of Electrical and Electronics Engineers, Inc. All rights reserved. Published December 2000. Printed in the United States of America.*

*No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher.*

*To order IEEE Press publications, call 1-800-678-IEEE.*

*Print: ISBN 0-7381-2601-2*

*SP1122*

*See other standards and standards-related product listings at: <http://standards.ieee.org/>*

*The publisher believes that the information and guidance given in this work serve as an enhancement to users, all parties must rely upon their own skill and judgement when making use of it. The publisher does not assume any liability to anyone for any loss or damage caused by any error or omission in the work, whether such error or omission is the result of negligence or any other cause. Any and all such liability is disclaimed.*

*This work is published with the understanding that the IEEE is supplying information through this publication, not attempting to render engineering or other professional services. If such services are required, the assistance of an appropriate professional should be sought. The IEEE is not responsible for the statements and opinions advanced in this publication.*

**Library of Congress Cataloging-in-Publication Data**

**IEEE 100 : the authoritative dictionary of IEEE standards terms.—7th ed.**

**p. cm.**

**ISBN 0-7381-2601-2 (paperback : alk. paper)**

**1. Electric engineering—Dictionaries. 2. Electronics—Dictionaries. 3. Computer engineering—Dictionaries. 4. Electric engineering—Acronyms. 5. Electronics—Acronyms. 6. Computer engineering—Acronyms. I. Institute of Electrical and Electronics Engineers.**

**TK9 .I28 2000  
621.3'03—dc21**

**00-050601**



**crest value**

being used for measurement.

(NPS/NID) 759-1984r, 301-1976s

(2) (ac voltmeter) The highest ratio of peak to rms voltage that can be applied to an ac voltmeter before overload sets in. The crest factor may depend upon the full-scale setting of the meter. (NPS) 300-1988r

(3) (of a periodic function) The ratio of its crest (peak, maximum) value to its root-mean-square (rms) value.

(PE/TR) C57.12.80-1978r

(4) (electrical measurements in power circuits) (of a periodic function) The ratio of the peak value to the rms value  $cf = y_p/y_{rms}$ . (PE/PSIM) 120-1989r

(5) (of a periodic function) The ratio of the peak value of a periodic function ( $y_{peak}$ ) to the rms value ( $y_{rms}$ );  $cf = y_{peak}/y_{rms}$ . (IA/PSE) 1100-1999

(6) (pulse carrier) The ratio of the peak pulse amplitude to the root-mean-square amplitude. *See also:* carrier.

(IM/AP/WMA/ANT) 194-1977w, 145-1983s

(7) (of an rms voltmeter) The highest ratio of peak to rms voltage that can be applied to an ac voltmeter before overload sets in. The crest factor may depend on the full-scale setting of the voltmeter. (NPS) 325-1996

(8) The ratio of the peak value to the rms value of an ac waveform measured under steady-state conditions. It is unitless, and the ratio for a pure sine wave is equal to  $\sqrt{2}$ .

$$cf = \frac{V_{in, pk}}{V_{in, rms}}$$

where

$V_{in}$  = the voltage at the user input terminals.

(PEL) 1515-2000

**crest value (1) (peak value) (power and distribution transformers)** The maximum absolute value of a function when such a maximum exists.

(PE/C/TR) 1313.1-1996, C57.12.80-1978r

(2) (of a wave, surge, or impulse) The maximum value that a wave, surge, or impulse attains.

(SPD/PE) C62.11-1999, C62.62-2000

(3) (surge arresters) The maximum value that an impulse attains. *Synonym:* peak value.

(SPD/PE) C62.22-1997, C62.1-1981s, C62.11-1987s, 2-1978w

**crest voltmeter** A voltmeter depending for its indications upon the crest or maximum value of the voltage applied to its terminals. *Note:* Crest voltmeters should have clearly marked on the instrument whether readings are in equivalent root-mean-square values or in true crest volts. It is preferred that the marking should be root-mean-square values of the sinusoidal wave having the same crest value as that of the wave measured. *See also:* instrument. (EEC/PE) [119]

**crest working line voltage (vlwm) (thyristor)** The highest instantaneous value of the line voltage excluding all repetitive and nonrepetitive transient voltages, but including voltage variations. (IA/IPC) 428-1981w

**crest working voltage (semiconductor rectifiers)** (between two points) The maximum instantaneous difference of voltage, excluding oscillatory and transient overvoltages, that exists during normal operation. *See also:* semiconductor rectifier stack; rectification. (IA/EEC/PCON) [62], [110]

**crevice corrosion** Localized corrosion as a result of the formation of a crevice between a metal and a nonmetal, or between two metal surface. (IA) [59], [71]

**criteria** Parameters against which the CASE tool is evaluated, and upon which selection decisions are made.

(C/SE) 1209-1992w

**critical angle (fiber optics)** When light propagates in a homogeneous medium of relatively high refractive index ( $n_{high}$ ) onto a planar interface with a homogeneous material of lower index ( $n_{low}$ ), the critical angle is defined by  $\arcsin(n_{low}/n_{high})$ . *Note:* When the angle of incidence exceeds the critical angle, the light is totally reflected by the interface. This is termed "total internal reflection." *See also:* step index profile; ac-

**250****critical design review**

ceptance angle; angle of incidence; reflection; refractive index; total internal reflection. (Std100) 812-1984w

**critical anode voltage** *See:* gas tube; breakdown voltage.

**critical branch (health care facilities)** A subsystem of the Emergency System consisting of feeders and branch circuits supplying energy to task illumination, special power circuits, and selected receptacles serving areas and functions related to patient care, and which can be connected to alternate power sources by one or more transfer switches during interruption of normal power source. (NEC/NESC/EMB) [47], [86]

**critical build-up resistance (rotating machinery)** The highest resistance of the shunt winding circuit supplied from the primary winding for which the machine voltage builds up under specified conditions. (PE) [9]

**critical build-up speed (rotating machinery)** The limiting speed below which the machine voltage will not build up under specified condition of field-circuit resistance. *See also:* direct-current commutating machine. (PE) [9]

**critical characteristics (1) (replacement parts for Class 1E equipment in nuclear power generating stations) (equipment)** Those properties or attributes that are essential for performance of an equipment's safety function.

(PE/NP) 934-1987w

(2) (replacement parts for Class 1E equipment in nuclear power generating stations) (parts) Those properties or attributes of the part that are essential to the safety function of the equipment in which the part is installed. *Note:* Typical critical characteristics are attributes such as dimensions, materials, electrical and temperature parameters, output tolerances, and fluid viscosity. (PE/NP) 934-1987w

**critical components** Equipment whose failure will result in complete system or functional failure. (PE/NP) 933-1999

**critical component temperature** The temperature of semiconductor components that are most susceptible to malfunction from high temperature. (C/BA) 14536-1995

**critical control command** An MTM-Bus command that has significant effect on the operation of a module to a degree that, for added security, a message conveying such a command should be difficult to send unintentionally. This Standard provides that a message containing a critical control command has to be preceded by an Enable Module Control (EMC) message. If this procedure is not followed, a Command Sequence Error will occur. (TT/C) 1149.5-1995

**critical controlling current (cryotron)** The current in the control that just causes direct-current resistance to appear in the gate, in the absence of gate current and at a specified temperature. *See also:* superconductivity. (SPD/PE) 32-1972r

**critical coupling** That degree of coupling between two circuits, independently resonant to the same frequency, that results in maximum transfer of energy at the resonance frequency. *See also:* coupling. (EEC/PE) [119]

**critical current (1) (superconductor)** The current in a superconductive material above which the material is normal and below which the material is superconducting, at a specified temperature and in the absence of external magnetic fields. *See also:* superconductivity. (ED) [46]

(2) The first-stroke lightning current to a phase conductor which produces a critical impulse flashover voltage wave.

(PE/T&D) 1243-1997

**critical damping** The least amount of viscous damping that causes a single-degree-of-freedom system to return to its original position without oscillation after initial disturbance.

(PE/SUB) 693-1997

**critical design review (CDR) (A)** A review conducted to verify that the detailed design of one or more configuration items satisfy specified requirements; to establish the compatibility among the configuration items and other items of equipment, facilities, software, and personnel; to assess risk areas for each configuration item; and, as applicable, to assess the results of producibility analyses, review preliminary hardware product specifications, evaluate preliminary test planning, and evaluate the adequacy of preliminary operation and support



## critical dimension

documents. *See also*: preliminary design review; system design review. (B) A review as in (A) of any hardware or software component. (C) 610.12-1990

**critical dimension (waveguide)** The dimension of the cross-section that determines the cutoff frequency. *See also*: waveguide. (EEC/PE) [119]

**critical event simulation** A simulation that is terminated by the occurrence of a certain event; for example, a model depicting the year-by-year forces leading up to a volcanic eruption, that is terminated when the volcano in the model erupts. *See also*: time-slice simulation. (C) 610.3-1989w

**critical failure** *See*: failure.

**critical field (1) (magnetrons)** The smallest theoretical value of steady magnetic flux density, at a steady anode voltage, that would prevent an electron emitted from the cathode at zero velocity from reaching the anode. *See also*: magnetron. (2) (nonlinear, active, and nonreciprocal waveguide components) In a gyromagnetic material that radio-frequency (rf) magnetic field level above which transfer of energy occurs from the uniform precession mode to spin waves; that is the field corresponding to nonlinear loss threshold. (MTT) 457-1982w

**critical flashover voltage (CFO)** The amplitude of voltage of a given waveshape that, under specified conditions, causes flashover through the surrounding medium on 50% of the voltage applications. (SPD/PE) C62.22-1997

**critical freeze protection (electric pipe heating systems)** The use of electric pipe heating systems to prevent the temperature of fluids from dropping below the freezing point of the fluid in important or critical outdoor (usually) piping systems at nuclear generating stations. An example of a critical freeze protection system is the heating for the nuclear service water system. (PE/EDPG) 622A-1984r, 622B-1988r

**critical frequency (1) (data transmission)** In radio propagation (by way of the ionosphere) the limiting frequency below which a wave component is reflected by, and above which it penetrates through, an ionospheric layer of vertical incidence. *Note*: The existence of the critical frequency is the result of electron limitation, that is, the inadequacy of the existing number of free electrons to support reflection at higher frequencies. (PE) 599-1985w

(2) (network or system) A pole or zero of a transfer or driving-point function. (CAS) [13]

(3) (of an ionospheric layer) The limiting frequency below which a normally-incident magneto-ionic wave component is returned by, and above which it penetrates through, an ionospheric layer. (AP/PROP) 211-1997

**critical grid voltage (multielectrode gas tubes)** The grid voltage at which anode breakdown occurs. *Note*: The critical grid voltage is a function of the other electrode voltages or currents and of the environment. *See also*: breakdown voltage. (ED) 161-1971w

**critical head (power operations)** The head at which the full-gate output of the hydroturbine equals the nameplate generator capacity. (PE/PSE) 858-1987s

**critical heat flux** The heat flux below which ignition is not possible. (DEI) 1221-1993w

**critical high-power level (attenuator tubes)** The radio-frequency power level at which ionization is produced in the absence of a control-electrode discharge. (ED) 161-1971w

**critical humidity** The relative humidity above which the atmospheric corrosion rate of a given metal increases sharply. (IA) [59]

**critical hydro period (power operations) (electric power supply)** Period when the limitations of hydroelectric energy supply due to water conditions are most critical with respect to system load requirements. (PE/PSE) 858-1987s, 346-1973w

**critical impulse (of a relay)** The maximum impulse in terms of duration and input magnitude that can be applied suddenly to a relay without causing pickup. (SWG/PE) C37.100-1992

**critical impulse flashover voltage (CFO) (insulators)** The crest value of the impulse wave that, under specified conditions, causes flashover through the surrounding medium on 50% of the applications. *See also*: impulse flashover voltage. (PE/T&D/SPD) 1410-1997, 32-1972r, 1243-1997

**critical impulse time (of a relay)** The duration of a critical impulse under specified conditions. (SWG/PE/PSR) C37.100-1992, C37.90-1978s

**critical item (software)** In configuration management, an item within a configuration item that, because of special engineering or logistic considerations, requires an approved specification to establish technical or inventory control at the component level. (C) 610.12-1990

**criticality (1) (power operations)** The state of an assembly of fissionable material in which a stable, self-sustaining chain reaction exists. At this condition a nuclear reactor will produce energy at a constant rate and the effective multiplication factor  $k_{eff}$  is exactly equal to 1. (PE/PSE) 858-1987s

(2) (software) The degree of impact that a requirement, module, error, fault, failure, or other item has on the development or operation of a system. *Synonym*: severity. (C) 610.12-1990

(3) A subjective description of the intended use and application of the system. Software criticality properties may include safety, security, complexity, reliability, performance, or other characteristics. (C/SE) 1012-1998

**criticality analysis** A structured evaluation of the software characteristics (e.g., safety, security, complexity, performance) for severity of impact of system failure, system degradation, or failure to meet software requirements or system objectives. (C/SE) 1012-1998

**critical jamming ratio** The ratio of conduit diameter (D) to cable diameter (d) that could result in the cable wedging or jamming in the conduit during the cable pull. (PE/IC) 1185-1994

**critical load (1)** That part of the load that requires continuous quality electric power for its successful operation. (IA/PSE) 241-1990r

(2) Devices and equipment whose failure to operate satisfactorily jeopardizes the health or safety of personnel, and/or results in loss of function, financial loss, or damage to property deemed critical by the user. (IA/PSE) 1100-1999

**critical magnetic field (superconductor)** The field below which a superconductor material is superconducting and above which the material is normal, at a specified temperature and in the absence of current. *See also*: superconductivity. (ED) [46]

**critical mating dimension (standard connector)** Those longitudinal and transverse dimensions assuring nondestructive mating with a corresponding standard connector. (IM/HFIM) 474-1973w

**critical overtravel time (of a relay)** The time following a critical impulse until movement of the responsive element ceases just short of pickup. (SWG/PE/PSR) C37.100-1992, C37.90-1978s

**critical path** In the critical path method, a path whose sum of activity times is greater than or equal to the sum of activity times for any other path through the network. *Note*: This sum of activity times is the shortest possible completion time of the overall project. (C) 610.2-1987

**critical path method (CPM)** A project management technique in which the activities that constitute a project are identified, dependencies among the activities are determined, a network of parallel and sequential activities is produced, an estimated time is assigned to each activity, and a sequence of activities taking the longest time (a critical path) is identified, determining the shortest possible completion time for the overall project. *See also*: program evaluation and review technique. (C) 610.2-1987

**critical period** That portion of the duty cycle that is the most severe, or the specified time period of the battery duty cycle. (PE/EDPG) 450-1995



## critical piece first

252

## cross bar switch

**critical piece first (software)** A system development approach in which the most critical aspects of a system are implemented first. The critical piece may be defined in terms of services provided, degree of risk, difficulty, or other criteria. *See also:* top-down; bottom-up. (C) 610.12-1990

**critical point (1) (feedback control system) (Nichols chart)** The bound of stability for the  $GH(j\omega)$  plot; the intersection of  $|GH| = 1$  with  $\arg GH = -180^\circ$ .

(2) **(Nyquist diagram)** The bound of stability for the locus of the loop transfer function  $GH(j\omega)$ ; the  $(-1, j0)$  point.

(PE/IM/EDPG) [3], [120]

**critical process control (electric pipe heating systems)** The use of electric heat tracing systems to increase or maintain, or both, the temperature of fluids (or processes) in important or critical mechanical piping systems including pipes, pumps, valves, tanks, instrumentation, etc., in nuclear power generating stations. An example of an important or critical mechanical piping system is the safety injection system.

(PE/EDPG) 622A-1984r, 622B-1988r

**critical range** Metric values used to classify software into the categories of acceptable, marginal, or unacceptable.

(C/SE) 1061-1998

**critical rate-of-rise of OFF-state voltage (thyristor)** The minimum value of the rate of rise of principal voltage which will cause switching from the OFF-state to the ON-state.

(IA/IPC) 428-1981w

**critical rate-of-rise of ON-state current (thyristor)** The maximum value of the rate-of-rise of ON-state current that a thyristor can withstand without deleterious effect. *See also:* principal current. (ED) [46]

**critical section (software)** A segment of code to be executed mutually exclusively with some other segment of code which is also called a critical section. Segments of code are required to be executed mutually exclusively if they make competing uses of a computer resource or data item. *See also:* segment; computer; code; data; execute. (C/SE) 729-1983s

**critical service loads** Station auxiliary loads that are sensitive to power supply disturbances and that have an immediate effect upon power transmission or whose outages could cause damage to the equipment. (SUB/PE) 1158-1991r

**critical short-circuit ratio (CSCR)** The SCR corresponding to the operation at maximum available power (MAP); for typical inverter design,  $CSCR = 2$ . *Note:* The following operational characteristics are associated with CSCR:

- CSCR represents the borderline between "stable" and "unstable" operating regions. For SCR values lower than CSCR, the operation is in the "unstable" region of the ac voltage/dc power characteristic.

- If the operation is at unity power factor for systems at CSCR (i.e., the operation is at MAP), then the fundamental component of the temporary overvoltage ( $TOV_r$ ) at full load rejection would be near to  $\sqrt{2}$ .

- A resonance near the second harmonic will occur for systems operating at CSCR.

(PE/T&D) 1204-1997

**critical software (software verification and validation plans) (software)** Software whose failure could have an impact on safety, or could cause large financial or social loss.

(C/SE) 1012-1986s, 610.12-1990, 730-1998

**critical speed (rotating machinery)** A speed at which the amplitude of the vibration of a rotor due to shaft transverse vibration reaches a maximum value. *See also:* rotor.

(PE) [9]

**critical stroke amplitude** The amplitude of the current of the lightning stroke that, upon terminating on the phase conductor, would raise the voltage of the conductor to a level at which flashover is likely. (SUB/PE) 998-1996

**critical success factor (CSF)** A business system performance measurement that combines with other CSFs to form a key performance indicator (KPI). (C/PA) 1003.23-1998

**critical system (health care facilities)** A system of feeders and branch circuits in nursing homes and residential custodial care

facilities arranged for connection to the alternate power source to restore service to certain critical receptacles, task illumination and equipment.

(EMB) [47]

**critical temperature (superconductor)** The temperature below which a superconductive material is superconducting and above which the material is normal, in the absence of current and external magnetic fields. *See also:* superconductivity.

(ED) [46]

**critical torsional speed (rotating machinery)** A speed at which the amplitude of the vibration of a rotor due to shaft torsional vibration reaches a maximum value. *See also:* rotor.

(PE) [9]

**critical travel (of a relay)** The amount of movement of the responsive element of a relay during a critical impulse, but not subsequent to the impulse.

(SWG/PE/PSR) C37.100-1992, C37.90-1978s

**critical value** Metric value of a validated metric that is used to identify software that has unacceptable quality.

(C/SE) 1061-1998

**critical voltage (1) (magnetrons)** The highest theoretical value of steady anode voltage, at a given steady magnetic flux density, at which electrons emitted from the cathode at zero velocity would fail to reach the anode. (ED) 161-1971w

(2) **(relay)** *See also:* relay critical voltage.

**critical-voltage parabola (magnetrons) (cutoff parabola)** The curve representing in Cartesian coordinates the variation of the critical voltage as a function of the magnetic induction. *See also:* magnetron. [84]

**critical withstand current (surge) (impulse)** The highest crest value of a surge of given waveshape and polarity that can be applied without causing disruptive discharge on the test specimen. (PE) [8]

**CROM** *See:* control read-only memory.

**Crookes dark space** *See:* cathode dark space.

**Crosby** *See:* cable clamp.

**Crosby clip** *See:* cable clamp.

**cross acceleration (accelerometer)** The acceleration applied in a plane normal to an accelerometer input reference axis.

(AES/GYAC) 528-1994

**crossarm** A horizontal member (usually wood or steel) attached to a pole, post, tower or other structure and equipped with means for supporting the conductors. *Note:* The crossarm is placed at right angles to conductors on straight line poles, but splits the angle on light corners. *See also:* tower.

(T&D/PE) [10]

**crossarm guy** A tensional support for a crossarm used to offset unbalanced conductor stress. (T&D/PE) [10]

**cross-assembler (software)** An assembler that executes on one computer but generates machine code for a different computer. (C) 610.12-1990

**cross-axis sensitivity (accelerometer)** The proportionality constant that relates a variation of accelerometer output to cross acceleration. This sensitivity varies with the direction of cross acceleration, and is primarily due to misalignment.

(AES/GYAC) 528-1994

**crossband transponder (navigation)** A transponder that replies in a different frequency band from that of the received interrogation. *See also:* navigation.

(AES/GCS/RS) 172-1983w, 686-1982s, [42]

**crossbar switch (1)** A switch having a plurality of vertical paths, a plurality of horizontal paths, and electromagnetically-operated mechanical means for interconnecting any one of the vertical paths with any one of the horizontal paths.

(PE/EDPG) [3]

(2) A switch having vertical and horizontal paths and an electromagnetically operated mechanical means for interconnection of any one vertical path with any one horizontal path. *See also:* step-by-step switch. (C) 610.7-1995

**cross bar switch** A relay-operated device that makes a connection between a line in a set of lines and a line in another set,



# Concise Dictionary



Collins

*An Imprint of HarperCollinsPublishers*



## HarperCollins Publishers

PO Box, Glasgow G4 0NB

First Edition 1982  
Second Edition 1988  
Third Edition 1992  
Revised Third Edition 1995  
Fourth Edition 1999  
**Fifth Edition 2001**

© HarperCollins Publishers 1982, 1988, 1992, 1995, 1999, 2001  
1 2 3 4 5 6 7 8 9 10

Standard Edition	ISBN 0 00 710978 4
Thumb-indexed Edition	ISBN 0 00 710979 2
Australian Edition	ISBN 0 00 711634 9

Collins® is a registered trademark of  
HarperCollins Publishers Limited

The HarperCollins website address is  
[www.fireandwater.com](http://www.fireandwater.com)

A catalogue record for this book is  
available from the British Library.

This edition prepared in conjunction with Market House Books Ltd, Aylesbury, England

Typeset by Market House Books Ltd, Aylesbury, England  
Printed and bound in Great Britain by Omnia Books Limited, Glasgow

Collins concise dictionary.  
5th ed.

ISBN 0 007 11634 9.

1 English language – Australia – Dictionaries. 2. English  
language – Dictionaries.

423

### Corpus Acknowledgments

We would like to thank those authors and publishers who kindly gave permission for copyright material to be used in the Bank of English. We would also like to thank Times Newspapers Ltd for providing valuable data.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher. This book is sold subject to the conditions that it shall not, by way of trade or otherwise, be lent, re-sold, hired out or otherwise circulated without the publisher's prior consent in any form of binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

Entered words that we have reason to believe constitute trademarks have been designated as such. However, neither the presence nor absence of such designation should be regarded as affecting the legal status of any trademark.



**critic**

348

**Cromwell**

**ORIG** C17: from Gk *kritērion*, from *kritēs* judge, from *krinein* to decide

**USAGE NOTE** *Criteria*, the plural of *criterion*, is occasionally mistakenly used as a singular noun: *this criterion is not valid; these criteria are not valid.*

**critic** ('krɪtɪk) *n* 1 a person who judges something. 2 a professional judge of art, music, literature, etc. 3 a person who often finds fault and criticizes. **ORIG** C16: from L *criticus*, from Gk *kritikos* capable of judging, from *kritēs* judge; see **CRITERION**

**critical** ('krɪtɪkəl) *adj* 1 containing or making severe or negative judgments. 2 containing analytical evaluations. 3 of a critic or criticism. 4 of or forming a crisis; crucial. 5 urgently needed. 6 *Inf.* so seriously injured or ill as to be in danger of dying. 7 *Physics.* of, denoting, or concerned with a state in which the properties of a system undergo an abrupt change. 8 *go critical.* (of a nuclear power station or reactor) to reach a state in which a nuclear-fission chain reaction becomes self-sustaining. ▶ **'criti'cality** *n* ▶ **'critically** *adv* ▶ **'criticalness** *n*

**critical mass** *n* the minimum mass of fissionable material that can sustain a nuclear chain reaction.

**critical path analysis** *n* a technique for planning projects with reference to the critical path, which is the sequence of stages requiring the longest time.

**critical temperature** *n* the temperature of a substance in its critical state. A gas can only be liquefied at temperatures below this.

**criticism** ('krɪtɪsɪzəm) *n* 1 the act or an instance of making an unfavourable or severe judgment, comment, etc. 2 the analysis or evaluation of a work of art, literature, etc. 3 the occupation of a critic. 4 a work that sets out to evaluate or analyse.

**criticize** or **criticise** ('krɪtɪsaɪz) *vb* criticizes, criticizing, criticized or criticises, criticising, criticised. 1 to judge (something) with disapproval; censure. 2 to evaluate or analyse (something).

▶ **'criti,cizable** or **'criti,cisable** *adj* ▶ **'criti,cizer** or **'criti,ciser** *n*

**critique** ('krɪtɪk) *n* 1 a critical essay or commentary. 2 the act or art of criticizing. **ORIG** C17: from F, from Gk *kritikē*, from *kritikos* able to discern

**croak** ('krɔʊk) *vb* 1 (*intr*) (of frogs, crows, etc.) to make a low, hoarse cry. 2 to utter (something) in this manner. 3 (*intr*) to grumble or be pessimistic. 4 *Sl.* 4a (*intr*) to die. 4b (*tr*) to kill. ◆ *n* 5 a low hoarse utterance or sound. **ORIG** OE *crācettan*

▶ **'croaky** *adj* ▶ **'croakiness** *n*

**croaker** ('krɔʊkə) *n* 1 an animal, bird, etc., that croaks. 2 a grumbling person.

**Croat** ('krɔʊæt) *n* 1a a native or inhabitant of Croatia. 1b a speaker of Croatian. ◆ *n, adj* 2 another word for **Croatian**.

**Croatia** ★ ('krɔʊ'eɪʃə) *n* a republic in SE Europe: settled by Croats in the 7th century; belonged successively to Hungary, Turkey, Austria, and Yugoslavia (1918–91); independence was gained (1991) following armed conflict with Serbia; involved in the civil war in Bosnia-Herzegovina (1991–95). Official language: Croatian. Religion: Roman Catholic majority. Currency: kuna. Capital: Zagreb. Pop.: 4 677 000 (1999 est.). Area: 55 322 sq. km (21 359 sq. miles). Croatian name: *Hrvatska*.

**Croatian** ('krɔʊ'eɪʃən) *adj* 1 of or relating to Croatia, its people, or their language. ◆ *n* 2 the official language of Croatia, a dialect of Serbo-Croat. 3a a native or inhabitant of Croatia. 3b a speaker of Croatian.

**croc** (krɒk) *n* short for **crocodile** (senses 1 and 2).

**Croce** ★ (Italian 'kro:tʃe) *n* **Benedetto** (bene'detto). 1866–1952, Italian philosopher: an opponent of Fascism, he helped re-establish liberalism in postwar Italy.

**crochet** ('krɔʊʃeɪ, -ʃɪ) *vb* crochets, crocheting (-ʃeɪɪŋ, -ʃɪɪŋ), crocheted (-ʃeɪd, -ʃɪd). 1 to make (a piece of needlework, a garment, etc.) by looping and intertwining thread with a hooked needle (**crochet hook**). ◆ *n* 2 work made by cro-

cheting. **ORIG** C19: from F *crochet*, dim. of *croc* hook, prob. of Scand. origin

▶ **'crocheter** *n*

**crock**<sup>1</sup> (krɒk) *n* 1 an earthen pot, jar, etc. 2 a piece of broken earthenware. **ORIG** OE *crocc* pot

**crock**<sup>2</sup> (krɒk) *Sl., chiefly Brit.* ◆ *n* 1 a person or thing that is old or decrepit (esp. in **old crock**). ◆ *vb* 2 to become or cause to become weak or disabled. **ORIG** C15: orig. Scot.; rel. to Norwegian *krake* unhealthy animal, Du. *kraak* decrepit person or animal

**crockery** ('krɒkəri) *n* china dishes, earthen vessels, etc., collectively.

**crocket** ('krɒkɪt) *n* a carved ornament in the form of a curled leaf or cusp, used in Gothic architecture. **ORIG** C17: from Anglo-F *croket* a little hook, from *croc* hook, of Scand. origin

**Crockett** ★ ('krɒkɪt) *n* David, known as *Davy Crockett*. 1786–1836, US frontiersman and soldier.

**crocodile** ('krɒkə,dail) *n* 1 a large tropical reptile having a broad head, tapering snout, massive jaws, and a thick outer covering of bony plates. 2a leather made from the skin of any of these animals. 2b (*as modifier*): *crocodile shoes*. 3 *Brit. inf.* a line of people, esp. schoolchildren, walking two by two. **ORIG** C13: via OF, from L *crocodilus*, from Gk  *krokodēilos* lizard, ult. from *krokē* pebble + *dilos* worm; referring to its basking on shingle

**crocodile clip** *n* a clasp with serrated interlocking edges used for making electrical connections, etc.

**Crocodile River** ★ *n* 1 a river in N South Africa; a tributary of the Limpopo. 2 a river that rises in NE South Africa and flows southeasterly into Mozambique.

**crocodile tears** *pl n* an insincere show of grief; false tears. **ORIG** from the belief that crocodiles wept over their prey to allure further victims

**crocodilian** ('krɒkə'dɪlɪən) *n* 1 any large predatory reptile of the order *Crocodylia*, which includes the crocodiles, alligators, and caymans. ◆ *adj* 2 of, relating to, or belonging to the *Crocodylia*. 3 of, relating to, or resembling a crocodile.

**crocus** ('krɔʊkəs) *n, pl crocuses.* any plant of the iridaceous genus *Crocus*, having white, yellow, or purple flowers. **ORIG** C17: from NL, from L *crocus*, from Gk *krokos* saffron

**Croesus** ★ ('kri:səs) *n* 1 died ?546 B.C., the last king of Lydia (560–546), noted for his great wealth. 2 any very rich man.

**croft** (krɒft) *n* *Brit.* a small enclosed plot of land, adjoining a house, worked by the occupier and his family, esp. in Scotland. **ORIG** OE *croft*

▶ **'crofter** *n* ▶ **'crofting** *adj, n*

**croissant** ('krwɒsɒŋ) *n* a flaky crescent-shaped bread roll. **ORIG** F, lit.: crescent

**Croix de Guerre** *French.* (krwa də ɡer) *n* a French military decoration awarded for gallantry in battle: established 1915. **ORIG** lit.: cross of war

**Cro-Magnon man** ('krɔʊ'mænjən, -'mægnən) *n* an early type of modern man, *Homo sapiens*, who lived in Europe during late Palaeolithic times. **ORIG** C19: after the cave (Cro-Magnon), Dordogne, France, where the remains were first found

**Cromer** ★ ('krɔʊmə) *n* 1st Earl of, title of (Evelyn) Baring.

**cromlech** ('krɒmlek) *n* 1 a circle of prehistoric standing stones. 2 (no longer in technical usage) a megalithic chamber tomb or dolmen. **ORIG** C17: from Welsh, from *crom*, fem. of *crwm* bent, arched + *llech* flat stone

**Crompton** ★ ('krɒmptən) *n* 1 Richmal, full name *Richmal Crompton Lamburn*. 1890–1969, British children's author, best known for her *Just William* stories. 2 Samuel. 1753–1827, British inventor of the spinning mule (1779).

**Cromwell** ★ ('krɒmwəl, -wəl) *n* 1 Oliver. 1599–1658, English general and statesman. A Puritan, he was a leader of the parliamentary army in the Civil War. After the execution of Charles I he quelled the Royalists in Scotland and Ireland, and became Lord Protector of the Commonwealth (1653–58). 2 his son, *Richard*. 1626–1712, Lord Protector of the Commonwealth (1658–59).

★ people and places



# McGraw-Hill DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS

## Fourth Edition



**Sybil P. Parker**

EDITOR IN CHIEF

**McGRAW-HILL BOOK COMPANY**

New York  
St. Louis  
San Francisco

Auckland	Bogotá
Caracas	Colorado Springs
Hamburg	Lisbon
London	Madrid
Mexico	Milan
Montreal	New Delhi
Oklahoma City	Panama
Paris	San Juan
São Paulo	Singapore
Sydney	Tokyo
Toronto	



On the cover: Pattern produced from white light by a computer-generated diffraction plate containing 529 square apertures arranged in a  $23 \times 23$  array. (R. B. Hoover, Marshall Space Flight Center)

On the title pages: Aerial photograph of the Sinai Peninsula made by Gemini spacecraft. (NASA)

Included in this Dictionary are definitions which have been published previously in the following works: P. B. Jordain, *Condensed Computer Encyclopedia*, Copyright © 1969 by McGraw-Hill, Inc. All rights reserved. J. Markus, *Electronics and Nucleonics Dictionary*, 4th ed., Copyright © 1960, 1966, 1978 by McGraw-Hill, Inc. All rights reserved. J. Quick, *Artists' and Illustrators' Encyclopedia*, Copyright © 1969 by McGraw-Hill, Inc. All rights reserved. *Blakiston's Gould Medical Dictionary*, 3d ed., Copyright © 1956, 1972 by McGraw-Hill, Inc. All rights reserved. T. Baumeister and L. S. Marks, eds., *Standard Handbook for Mechanical Engineers*, 7th ed., Copyright © 1958, 1967 by McGraw-Hill, Inc. All rights reserved.

In addition, material has been drawn from the following references: R. E. Huschke, *Glossary of Meteorology*, American Meteorological Society, 1959; *U.S. Air Force Glossary of Standardized Terms*, AF Manual 11-1, vol. 1, 1972; *Communications-Electronics Terminology*, AF Manual 11-1, vol. 3, 1970; W. H. Allen, ed., *Dictionary of Technical Terms for Aerospace Use*, 1st ed., National Aeronautics and Space Administration, 1965; J. M. Gilliland, *Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations*, Royal Aircraft Establishment Technical Report 67158, 1967; *Glossary of Air Traffic Control Terms*, Federal Aviation Agency; *A Glossary of Range Terminology*, White Sands Missile Range, New Mexico, National Bureau of Standards, AD 467-424; *A DOD Glossary of Mapping, Charting and Geodetic Terms*, 1st ed., Department of Defense, 1967; P. W. Thrush, comp. and ed., *A Dictionary of Mining, Mineral, and Related Terms*, Bureau of Mines, 1968; *Nuclear Terms: A Glossary*, 2d ed., Atomic Energy Commission; F. Casey, ed., *Compilation of Terms in Information Sciences Technology*, Federal Council for Science and Technology, 1970; *Glossary of Space Terminology*, Office of Aerospace Research, U.S. Air Force, 1963; *Naval Dictionary of Electronic, Technical, and Imperative Terms*, Bureau of Naval Personnel, 1962; *ADP Glossary*, Department of the Navy, NAVSO P-3097.

#### McGraw-Hill Dictionary of Scientific and Technical Terms, Fourth Edition

Copyright © 1989, 1984, 1978, 1976, 1974 by McGraw-Hill, Inc. All rights reserved. Printed in the United States of America. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a data base or retrieval system, without the prior written permission of the publisher.

1 2 3 4 5 6 7 8 9 0 DOW/DOW 8 9 5 4 3 2 1 0 9 8

ISBN 0-07-045270-9

#### Library of Congress Cataloging-in-Publication Data

McGraw-Hill dictionary of scientific and technical terms.

1. Science—Dictionaries. 2. Technology—Dictionaries.

I. Parker, Sybil P.

Q123.M34 1989 503/.21 88-13490

ISBN 0-07-045270-9

For more information about other McGraw-Hill materials, call 1-800-2-MCGRAW in the United States. In other countries, call your nearest McGraw-Hill office.

lizes in the tetragonal system at low temperatures and the isometric system at high temperatures. { 'kri'stò-ba,lit }

**crit** [NUCLEO] The mass of fissionable material that is critical under a given set of conditions, sometimes applied to the mass of an untamped critical sphere of fissionable material. { 'krit }

**crith** [MECH] A unit of mass, used for gases, equal to the mass of 1 liter of hydrogen at standard pressure and temperature; it is found experimentally to equal  $8.9885 \times 10^{-5}$  kilogram. { 'krit }

**critical** [NUCLEO] Capable of sustaining a chain reaction at a constant level. { 'krid-ə-kəl }

**critical absorption wavelength** [SPECT] The wavelength, characteristic of a given electron energy level in an atom of a specified element, at which an absorption discontinuity occurs. { 'krid-ə-kəl əb'sorpsən 'wæv,leŋθ }

**critical altitude** [AERO ENG] The maximum altitude at which a supercharger can maintain a pressure in the intake manifold of an engine equal to that existing during normal operation at rated power and speed at sea level without the supercharger. [ORD] The maximum altitude at which the propulsion system of a missile performs satisfactorily. { 'krid-ə-kəl 'altə,tud }

**critical angle** [PHYS] An angle associated with total reflection of electromagnetic or acoustic radiation back into a medium from the boundary with another medium in which the radiation has a higher phase velocity; it is the smallest angle with the normal to the boundary at which total reflection occurs. { 'krid-ə-kəl 'aŋgəl }

**critical angle of attack** [AERO ENG] The angle of attack of an airfoil at which the flow of air about the airfoil changes abruptly so that lift is sharply reduced and drag is sharply increased. Also known as stalling angle of attack. { 'krid-ə-kəl 'aŋgəl əv 'ə'tak }

**critical angle refractometer** [OPTICS] A refractometer, such as the Abbe or Pulfrich refractometer, in which the index of refraction of a medium A is measured by observing its critical angle with respect to another medium B with a known index of refraction, or by measuring the critical angle of B with respect to A. { 'krid-ə-kəl 'aŋgəl rē,frak'tam-əd-ər }

**critical anode voltage** [ELECTR] The anode voltage at which breakdown occurs in a gas tube. { 'krid-ə-kəl 'a,nəd,völtij }

**critical area** See picture element. { 'krid-ə-kəl 'er-ə-ə }

**critical assembly** [NUCLEO] An assembly of sufficient fissionable and moderator material to sustain a fission chain reaction at a low power level. { 'krid-ə-kəl ə'sembli }

**critical bottom slope** [GEOL] The depth distribution in which depth  $d$  of an ocean increases with latitude  $\phi$  according to an equation of the form  $d = d_0 \sin \phi + \text{constant}$ . { 'krid-ə-kəl 'bəd-əm,slop }

**critical compression ratio** [MECH ENG] The lowest compression ratio which allows compression ignition of a specific fuel. { 'krid-ə-kəl kəm'presh-ən,rā'shō }

**critical condensation temperature** [PHYS CHEM] The temperature at which the sublimand of a sublimed solid recondenses; used to analyze solid mixtures, analogous to liquid distillation. Also known as true condensing point. { 'krid-ə-kəl ,kändən'sā-shən,tem'prə-čər }

**critical constant** [PHYS CHEM] A characteristic temperature, pressure, and specific volume of a gas above which it cannot be liquefied. { 'krid-ə-kəl 'kän-stənt }

**critical cooling rate** [MET] The minimum cooling rate that will suppress undesired transformations in a metal. { 'krid-ə-kəl 'kūl'ɪŋ,rāt }

**critical coupling** [ELIC] The degree of coupling that provides maximum transfer of signal energy from one radio-frequency resonant circuit to another when both are tuned to the same frequency. Also known as optimum coupling. { 'krid-ə-kəl 'kəplɪŋ }

**critical current** [SOLID STATE] The current in a superconductive material above which the material is normal and below which the material is superconducting, at a specified temperature and in the absence of external magnetic fields. { 'krid-ə-kəl 'kər-ənt }

**critical current density** [PHYS CHEM] The amount of current per unit area of electrode at which an abrupt change occurs in a variable of an electrolytic process. { 'krid-ə-kəl 'kər-ənt,dən'sad-ē }

**critical damping** [PHYS] Damping in a linear system on the threshold between oscillatory and exponential behavior. { 'krid-ə-kəl 'dampɪŋ }

**critical density** [ASTRON] The mass density above which it is believed, the expansion of the universe will slow down and reverse. [CHEM] The density of a substance exhibited at its critical temperature and critical pressure. [CIV ENG] For a highway, the density of traffic when the volume equals the capacity. [GEOL] That degree of density of a saturated, granular material below which, as it is rapidly deformed, it will decrease in strength and above which it will increase in strength. { 'krid-ə-kəl 'den'sad-ē }

**critical depth** [HYD] In a water channel, that depth at which the flow is at its minimum energy with respect to the bottom of the channel. { 'krid-ə-kəl 'depθ }

**critical elevation** [MAP] That elevation which is the high point within the area of a chart. { 'krid-ə-kəl ,el-ə'vā-shən }

**critical equation** [NUCLEO] Any equation relating parameters of a reactor that must be satisfied for the reactor to be critical. { 'krid-ə-kəl i'kwā:zhən }

**critical equatorial velocity** [ASTRON] In rotating early-type stars, the velocity at which the centrifugal force at the equator equals the force of gravity there. { 'krid-ə-kəl ,ek-wə'ɪɔr-əl və'las-əd-ē }

**critical experiment** [NUCLEO] An experiment in which fissionable material is assembled gradually until the arrangement will support a self-sustaining chain reaction. { 'krid-ə-kəl iks'perə'mənt }

**critical exponent** [THERMO] A parameter  $n$  that characterizes the temperature dependence of a thermodynamic property of a substance near its critical point, the temperature dependence has the form  $|T - T_c|^n$ , where  $T$  is the temperature and  $T_c$  is the critical temperature. { 'krid-ə-kəl iks'pōn-ənt }

**critical facility** [NUCLEO] A facility where critical experiments are conducted. { 'krid-ə-kəl fə'sil-əd-ē }

**critical field** [ELECTR] The smallest theoretical value of steady magnetic flux density that would prevent an electron emitted from the cathode of a magnetron at zero velocity from reaching the anode. Also known as cutoff field. { 'krid-ə-kəl 'fi:ld }

**critical flicker frequency** [OPTICS] That frequency of an intermittent light source at which the light appears half the time as flickering and half the time as continuous. { 'krid-ə-kəl 'flik-ər,frē'kwəns-ē }

**critical flow** [FL MECH] The rate of flow of a fluid equivalent to the speed of sound in that fluid. { 'krid-ə-kəl 'flō }

**critical flow prover** [PETRO ENG] Device used to measure the velocity of gas flow during open-flow testing of gas wells. { 'krid-ə-kəl 'flō,pruv-ər }

**critical frequency** [ELECTR] See cutoff frequency. [ELECTROMAG] The limiting frequency below which a radio wave will be reflected by an ionospheric layer at vertical incidence at a given time. [GEOPHYS] The minimum frequency of a vertically directed radio wave which will penetrate a particular layer in the ionosphere; for example, all vertical radio waves with frequencies greater than the E-layer critical frequency will pass through the E layer. Also known as penetration frequency. { 'krid-ə-kəl frē'kwəns-ē }

**critical function** [MATH] A function satisfying the Euler equations in the calculus of variations. { 'krid-ə-kəl fəŋk-shən }

**critical gas saturation** See equilibrium gas saturation. { 'krid-ə-kəl 'gæs,sach-ə'rā'shən }

**critical grid current** [ELECTR] Instantaneous value of grid current when the anode current starts to flow in a gas-filled vacuum tube. { 'krid-ə-kəl 'grɪd,kər-ənt }

**critical grid voltage** [ELECTR] The grid voltage at which anode current starts to flow in a gas tube. Also known as firing point. { 'krid-ə-kəl 'grɪd,völtij }

**critical gun pull** [ORD] The maximum pulling force in pounds developed by the gun feeder mechanism during operation of automatic guns. { 'krid-ə-kəl 'gʌn,pʊl }

**critical humidity** [CHEM ENG] The humidity of a system's atmosphere above which a crystal of a water-soluble salt will always become damp (absorb moisture from the atmosphere) and below which it will always stay dry (release moisture to the atmosphere). [MET] The atmospheric humidity above which the corrosion rate increases rapidly for a particular metal. { 'krid-ə-kəl yū'mid-əd-ē }

**criticality** [NUCLEO] The condition in which a nuclear reactor is just self-sustaining. { 'krid-ə-kəl 'ad-ē }

**critical level of escape** [GEOPHYS] 1. That level, in the at-



# **McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS**

**Sixth  
Edition**

**McGraw-Hill**

New York Chicago San Francisco  
Lisbon London Madrid Mexico City  
Milan New Delhi San Juan Seoul Singapore Sydney Toronto

**On the cover: Representation of a fullerene molecule with a noble gas atom trapped inside. At the Permian-Triassic sedimentary boundary the noble gases helium and argon have been found trapped inside fullerenes. They exhibit isotope ratios quite similar to those found in meteorites, suggesting that a fireball meteorite or asteroid exploded when it hit the Earth, causing major changes in the environment. (Image copyright © Dr. Luann Becker. Reproduced with permission.)**

Over the six editions of the Dictionary, material has been drawn from the following references: G. M. Garrity et al., *Taxonomic Outline of the Prokaryotes*, Release 2, Springer-Verlag, January 2002; D. W. Linzey, *Vertebrate Biology*, McGraw-Hill, 2001; J. A. Pechenik, *Biology of the Invertebrates*, 4th ed., McGraw-Hill, 2000; U.S. Air Force *Glossary of Standardized Terms*, AF Manual 11-1, vol. 1, 1972; F. Casey, ed., *Compilation of Terms in Information Sciences Technology*, Federal Council for Science and Technology, 1970; *Communications-Electronics Terminology*, AF Manual 11-1, vol. 3, 1970; P. W. Thrush, comp. and ed., *A Dictionary of Mining, Mineral, and Related Terms*, Bureau of Mines, 1968; *A DOD Glossary of Mapping, Charting and Geodetic Terms*, Department of Defense, 1967; J. M. Gilliland, *Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations*, Royal Aircraft Establishment Technical Report 67158, 1967; W. H. Allen, ed., *Dictionary of Technical Terms for Aerospace Use*, National Aeronautics and Space Administration, 1965; *Glossary of Stinfo Terminology*, Office of Aerospace Research, U.S. Air Force, 1963; *Naval Dictionary of Electronic, Technical, and Imperative Terms*, Bureau of Naval Personnel, 1962; R. E. Huschke, *Glossary of Meteorology*, American Meteorological Society, 1959; *ADP Glossary*, Department of the Navy, NAVSO P-3097; *Glossary of Air Traffic Control Terms*, Federal Aviation Agency; *A Glossary of Range Terminology*, White Sands Missile Range, New Mexico, National Bureau of Standards, AD 467-424; *Nuclear Terms: A Glossary*, 2d ed., Atomic Energy Commission.

#### **McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS, Sixth Edition**

Copyright © 2003, 1994, 1989, 1984, 1978, 1976, 1974 by The McGraw-Hill Companies, Inc. All rights reserved. Printed in the United States of America. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of the publisher.

1 2 3 4 5 6 7 8 9 0    DOW/DOW    0 8 7 6 5 4 3 2

ISBN 0-07-042313-X

#### **Library of Congress Cataloging-in-Publication Data**

McGraw-Hill dictionary of scientific and technical terms--6th ed.

p.    cm.

ISBN 0-07-042313-X (alk. paper)

1. Science--Dictionaries.    2. Technology--Dictionaries.    I. Title: Dictionary of scientific and technical terms.

Q123.M15    2002  
503--dc21

2002026436



508

cricondenbar

critical current

base of the larynx in humans and most other mammals. { 'krɪˌkɔɪd }

**cricondenbar** [PHYS CHEM] Maximum pressure at which two phases (for example, liquid and vapor) can coexist. { krəˈkænˌdɛnˌbɑːr }

**cricondentherm** [PHYS CHEM] Maximum temperature at which two phases (for example, liquid and vapor) can coexist. { krəˈkænˌdɛnˌθɜːrm }

**Criconematoidea** [INV ZOO] A superfamily of plant parasitic nematodes of the order Diplogasterida distinguished by their ectoparasitic habit and males that have atrophied mouthparts and do not feed. { ˌkrɪˌkɔːnɛmˌəˈtɔɪdˌiːə }

**cri du chat syndrome** [MED] An inherited condition characterized by mental subnormality, physical abnormalities, and the emitting of a flat, toneless, catlike cry in infancy. { ˌkrɛˈduˈʃɑːˌsɪnˌdrəm }

**criminal abortion** [MED] Illegal interruption of pregnancy. { ˌkrɪmˌənˌəl əˈbɔːrˌʃən }

**criminalistics** See forensic science. { ˌkrɪmˌənˌəlˈɪsˌtɪks }

**crimp** [ENG] 1. To cause something to become wavy, crinkled, or warped, such as lumber. 2. To pinch or press together, especially a tubular or cylindrical shape, in order to seal or unite. [TEXT] To give curl to synthetic fibers. { ˌkrɪmp }

**crimp contact** [ELEC] A contact whose back portion is a hollow cylinder that will accept a wire; after a bared wire is inserted, a swaging tool is applied to crimp the contact metal firmly against the wire. Also known as solderless contact. { ˌkrɪmpˌkæŋˌtækt }

**crinal** [MECH] A unit of force equal to 0.1 newton. { ˌkrɪnˌəl }

**crinion-menton** [ANTHRO] The measurement from the hairline in the center part of the forehead to the midpoint of the lower edge of the chin. { ˌkrɪnˌiːənˌmɛnˌtæn }

**crinkling** See wrinkling. { ˌkrɪŋkˌlɪŋ }

**crinoidal limestone** [PETR] A rock composed predominantly of crystalline joints of crinoids, with foraminiferans, corals, and mollusks. { ˌkrɪˈnɔɪdˌəl ˈlɪmˌstɒŋ }

**Crinoidea** [INV ZOO] A class of radially symmetrical crinozoans in which the adult body is flower-shaped and is either carried on an anchored stem or is free-living. { krəˈnɔɪdˌiːə }

**crinoline** [TEXT] 1. A stiff fabric with an open weave that is filled with hard-twist cotton warp and horsehair. 2. A fabric with a firm starched or permanent resin finish. { ˌkrɪnˌəlˌɪn }

**Crinozoa** [INV ZOO] A subphylum of the Echinodermata comprising radially symmetrical forms that show a partly meridional pattern of growth. { ˌkrɪˈnɔːzə }

**cripple** [BUILD] A structural member, such as a stud above a window, that is cut less than full length. { ˌkrɪpˌəl }

**crippled leap-frog test** [COMPUT SCI] A variation of the leap-frog test, modified so the computer tests are repeated from a single set of storage locations rather than a changing set of locations. { ˌkrɪpˌəld ˈlɛpˌfrægˌtɛst }

**crippled mode** [COMPUT SCI] The operation of a computer at reduced capacity when certain parts are not working. { ˌkrɪpˌəldˌmɔːd }

**crisis** [MED] The turning point in the course of a disease. [PSYCH] The psychological events associated with a specific stage of life, as an identity crisis or developmental crisis. { ˌkrɪˈsɪs }

**crispation number** [PHYS] A dimensionless number used in the study of convection currents, equal to the product of a fluid's dynamic viscosity and its thermal diffusivity, divided by the product of its undisturbed surface tension and a layer thickness. { ˌkrɪˈspəˌʃənˌnəmˌbɜːr }

**crisp set** [MATH] A conventional set, wherein the degree of membership of any object in the set is either 0 or 1. { ˌkrɪspˌset }

**crissum** [VERT ZOO] 1. The region surrounding the cloacal opening in birds. 2. The vent feathers covering the circumcloacal region. { ˌkrɪsˌəm }

**crista** [BIOL] A ridge or crest. [CYTOL] A fold on the inner membrane of a mitochondrion. { ˌkrɪˈstə }

**cristate** [BIOL] Having a crista. { ˌkrɪˈstæt }

**Cristispira** [MICROBIO] A genus of bacteria in the family Spirochaetaceae; helical cells with 3–10 complete turns; they have ovoid inclusion bodies and bundles of axial fibrils; commensals in mollusks. { ˌkrɪsˌtəˈspɪˌrə }

**crystalite** [MINERAL] SiO<sub>2</sub> A silicate mineral that is a

high-temperature form of quartz; stable above 1470°C; crystallizes in the tetragonal system at low temperatures and the isometric system at high temperatures. { ˌkrɪˈstɔːˌbəlɪt }

**crit** [NUCLEO] The mass of fissionable material that is critical under a given set of conditions; sometimes applied to the mass of an untamped critical sphere of fissionable material. { ˌkrɪt }

**crith** [MECH] A unit of mass, used for gases, equal to the mass of 1 liter of hydrogen at standard pressure and temperature; it is found experimentally to equal  $8.9885 \times 10^{-5}$  kilogram. { ˌkrɪθ }

**critical** [NUCLEO] Capable of sustaining a chain reaction at a constant level. { ˌkrɪdˌəˌkəl }

**critical absorption wavelength** [SPECT] The wavelength, characteristic of a given electron energy level in an atom of a specified element, at which an absorption discontinuity occurs. { ˌkrɪdˌəˌkəl əbˈsɔːpˌʃən ˈwævˌlɛŋkθ }

**critical altitude** [AERO ENG] The maximum altitude at which a supercharger can maintain a pressure in the intake manifold of an engine equal to that existing during normal operation at rated power and speed at sea level without the supercharger. [ORD] The maximum altitude at which the propulsion system of a missile performs satisfactorily. { ˌkrɪdˌəˌkəl ˈælˌtɪtəd }

**critical angle** [ARCH] The angle of pitch of a flight of stairs or a ramp that, if exceeded, is considered uncomfortable and unsafe; it is 50° for stairs and 20° for ramps. [PHYS] An angle associated with total reflection of electromagnetic or acoustic radiation back into a medium from the boundary with another medium in which the radiation has a higher phase velocity; it is the smallest angle with the normal to the boundary at which total reflection occurs. { ˌkrɪdˌəˌkəl ˈæŋˌɡəl }

**critical angle of attack** [AERO ENG] The angle of attack of an airfoil at which the flow of air about the airfoil changes abruptly so that lift is sharply reduced and drag is sharply increased. Also known as stalling angle of attack. { ˌkrɪdˌəˌkəl ˈæŋˌɡəl əv ˈatak }

**critical angle refractometer** [OPTICS] A refractometer, such as the Abbe or Pulfrich refractometer, in which the index of refraction of a medium A is measured by observing its critical angle with respect to another medium B with a known index of refraction, or by measuring the critical angle of B with respect to A. { ˌkrɪdˌəˌkəl ˈæŋˌɡəl ˌrɛˌfrakˈtəmˌədər }

**critical anode voltage** [ELECTR] The anode voltage at which breakdown occurs in a gas tube. { ˌkrɪdˌəˌkəl ˈænˌəd ˈvɔlˌtɪdʒ }

**critical area** See picture element. { ˌkrɪdˌəˌkəl ˈerˌeːə }

**critical assembly** [NUCLEO] An assembly of sufficient fissionable and moderator material to sustain a fission chain reaction at a low power level. { ˌkrɪdˌəˌkəl əˈsemˌblɪ }

**critical bottom slope** [GEOL] The depth distribution in which depth d of an ocean increases with latitude φ according to an equation of the form  $d = d_0 \sin \phi + \text{constant}$ . { ˌkrɪdˌəˌkəl ˈbɒtəmˌsləʊp }

**critical care medicine** [MED] The treatment of acute, life-threatening disorders, usually in intensive care units. { ˌkrɪdˌəˌkəl ˈker ˌmedˌəˌsən }

**critical compression ratio** [MECH ENG] The lowest compression ratio which allows compression ignition of a specific fuel. { ˌkrɪdˌəˌkəl kəmˈprɛʃənˌræˌʃoː }

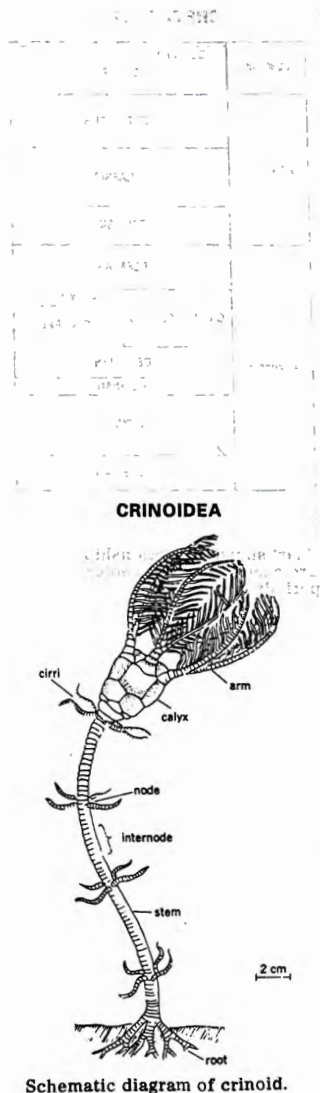
**critical condensation temperature** [PHYS CHEM] The temperature at which the sublimand of a sublimed solid recondenses; used to analyze solid mixtures, analogous to liquid distillation. Also known as true condensing point. { ˌkrɪdˌəˌkəl kənˌdɛnˌsəˌʃənˌtemˌprətʃər }

**critical constant** [PHYS CHEM] A characteristic temperature, pressure, and specific volume of a gas above which it cannot be liquefied. { ˌkrɪdˌəˌkəl ˈkænˌstənt }

**critical cooling rate** [MET] The minimum cooling rate that will suppress undesired transformations in a metal. { ˌkrɪdˌəˌkəl ˈkʊlˌɪŋ ˌræt }

**critical coupling** [ELEC] The degree of coupling that provides maximum transfer of signal energy from one radio-frequency resonant circuit to another when both are tuned to the same frequency. Also known as optimum coupling. { ˌkrɪdˌəˌkəl ˈkʌpˌlɪŋ }

**critical current** [SOLID STATE] The current in a superconductive material above which the material is normal and below which the material is superconducting, at a specified temperature and in the absence of external magnetic fields. { ˌkrɪdˌəˌkəl ˈkʌrˌɛnt }



Schematic diagram of crinoid.



## critical current density

**critical current density** [PHYS CHEM] The amount of current per unit area of electrode at which an abrupt change occurs in a variable of an electrolytic process. { 'krid-ə-kəl 'kær-ənt ,den-səd-ē }

**critical damping** [PHYS] Damping in a linear system on the threshold between oscillatory and exponential behavior. { 'krid-ə-kəl 'dæm-piŋ }

**critical density** [ASTRON] The mass density above which, it is believed, the expansion of the universe will slow down and reverse. [CHEM] The density of a substance exhibited at its critical temperature and critical pressure. [CIV ENG] For a highway, the density of traffic when the volume equals the capacity. [GEOL] That degree of density of a saturated, granular material below which, as it is rapidly deformed, it will decrease in strength and above which it will increase in strength. [THERMO] The density of a substance at the liquid-vapor-critical point. { 'krid-ə-kəl 'den-səd-ē }

**critical depth** [HYD] In a water channel, that depth at which the flow is at its minimum energy with respect to the bottom of the channel. { 'krid-ə-kəl 'depθ }

**critical elevation** [MAP] That elevation which is the high point within the area of a chart. { 'krid-ə-kəl ,el-ə'vā-shən }

**critical equation** [NUCLEO] Any equation relating parameters of a reactor that must be satisfied for the reactor to be critical. { 'krid-ə-kəl i'kwā-zhən }

**critical equatorial velocity** [ASTRON] In rotating early-type stars, the velocity at which the centrifugal force at the equator equals the force of gravity there. { 'krid-ə-kəl ,ek-wə'tōr-ē-əl vā'si-əd-ē }

**critical experiment** [NUCLEO] An experiment in which fissionable material is assembled gradually until the arrangement will support a self-sustaining chain reaction. { 'krid-ə-kəl iks'pə-rə-mənt }

**critical exponent** [THERMO] A parameter  $n$  that characterizes the temperature dependence of a thermodynamic property of a substance near its critical point; the temperature dependence has the form  $T - T_c^n$ , where  $T$  is the temperature and  $T_c$  is the critical temperature. { 'krid-ə-kəl iks'pō-nənt }

**critical facility** [NUCLEO] A facility where critical experiments are conducted. { 'krid-ə-kəl fə'sil-əd-ē }

**critical field** [ELECTR] The smallest theoretical value of steady magnetic flux density that would prevent an electron emitted from the cathode of a magnetron at zero velocity from reaching the anode. Also known as cutoff field. [SOLID STATE] The magnetic field strength below which magnetic flux is excluded from a type I superconductor. Symbolized  $H_c$ . { 'krid-ə-kəl 'fild }

**critical flicker frequency** [OPTICS] That frequency of an intermittent light source at which the light appears half the time as flickering and half the time as continuous. { 'krid-ə-kəl 'flik-ər ,frē-kwən-sē }

**critical flow** [FL MECH] The rate of flow of a fluid equivalent to the speed of sound in that fluid. { 'krid-ə-kəl 'flō }

**critical flow prover** [PETRO ENG] Device used to measure the velocity of gas flow during open-flow testing of gas wells. { 'krid-ə-kəl 'flō ,prū-vər }

**critical frequency** [ELECTR] See cutoff frequency. [ELECTROMAG] The limiting frequency below which a radio wave will be reflected by an ionospheric layer at vertical incidence at a given time. [GEOPHYS] The minimum frequency of a vertically directed radio wave which will penetrate a particular layer in the ionosphere; for example, all vertical radio waves with frequencies greater than the E-layer critical frequency will pass through the E layer. Also known as penetration frequency. { 'krid-ə-kəl 'frē-kwən-sē }

**critical frequency of fusion** [NEURO] A sufficiently high flash rate at which the eye fails to detect the flicker of a light; that is, the light pulses seem to fuse to form a steady light indistinguishable from a continuous light that has the same total energy per unit time. { 'krid-ə-kəl 'frē-kwən-sē-əv 'fyū-zhən }

**critical function** [MATH] A function satisfying the Euler equations in the calculus of variations. { 'krid-ə-kəl 'fəŋk-shən }

**critical gas saturation** See equilibrium gas saturation. { 'krid-ə-kəl 'gæs ,sach-ə'rā-shən }

**critical grid current** [ELECTR] Instantaneous value of grid current when the anode current starts to flow in a gas-filled vacuum tube. { 'krid-ə-kəl 'grid ,kær-ənt }

## critical potential

509

**critical grid voltage** [ELECTR] The grid voltage at which anode current starts to flow in a gas tube. Also known as firing point. { 'krid-ə-kəl 'grid ,vōl-tij }

**critical gun pull** [ORD] The maximum pulling force in pounds developed by the gun feeder mechanism during operation of automatic guns. { 'krid-ə-kəl 'gən ,pʊl }

**critical humidity** [CHEM ENG] The humidity of a system's atmosphere above which a crystal of a water-soluble salt will always become damp (absorb moisture from the atmosphere) and below which it will always stay dry (release moisture to the atmosphere). [MET] The atmospheric humidity above which the corrosion rate increases rapidly for a particular metal. { 'krid-ə-kəl yū'mid-əd-ē }

**critical isotherm** [THERMO] A curve showing the relationship between the pressure and volume of a gas at its critical temperature. { 'krid-ə-kəl 'ī-sə-thərm }

**criticality** [NUCLEO] The condition in which a nuclear reactor is just self-sustaining. { 'krid-ə-kəl 'ad-ē }

**critical level of escape** [GEOPHYS] 1. That level, in the atmosphere, at which a particle moving rapidly upward will have a probability of  $1/e$  ( $e$  is base of natural logarithm) of colliding with another particle on its way out of the atmosphere. 2. The level at which the horizontal mean free path of an atmospheric particle equals the scale height of the atmosphere. { 'krid-ə-kəl 'lev-əl əv ə'skəp }

**critical line** See critical locus. { 'krid-ə-kəl 'līn }

**critical locus** [PHYS CHEM] The line connecting the critical points of a series of liquid-gas phase-boundary loops for multicomponent mixtures plotted on a pressure versus temperature graph. Also known as critical line. { 'krid-ə-kəl 'lō-kəs }

**critical Mach number** [AERO ENG] The free-stream Mach number at which a local Mach number of 1.0 is attained at any point on the body under consideration. { 'krid-ə-kəl 'māk ,nəm-bər }

**critical magnetic field** [SOLID STATE] The field below which a superconductive material is superconducting and above which the material is normal, at a specified temperature and in the absence of current. { 'krid-ə-kəl mag'ned-ik 'fild }

**critical magnetic scattering** [SOLID STATE] Intense scattering of low-energy neutrons by a ferromagnetic crystal at temperatures near the Curie point. { 'krid-ə-kəl mag'ned-ik 'skad-ər-iŋ }

**critical mass** [NUCLEO] The mass of fissionable material of a particular shape that is just sufficient to sustain a nuclear chain reaction. { 'krid-ə-kəl 'mas }

**critical micelle concentration** [PHYS CHEM] The concentration of a micelle (oriented molecular arrangement) of an electrically charged colloidal particle or ion at which the rate of increase of electrical conductance with increase in concentration levels off or proceeds at a much slower rate. { 'krid-ə-kəl mi'sel ,kän-sən'trā-shən }

**critical moisture content** [CHEM ENG] The average moisture throughout a solid material being dried, its value being related to drying rate, thickness of material, and the factors that influence the movement of moisture within the solid. { 'krid-ə-kəl 'mōis-cher ,kän'tent }

**critical opalescence** [OPTICS] Extreme opalescence resulting from strong density fluctuations in a medium near a critical point. { 'krid-ə-kəl ,ōp-ə'les-əns }

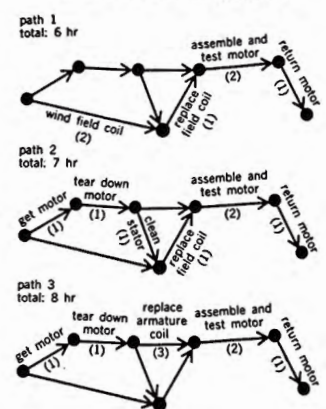
**critical path method** [SYS ENG] A systematic procedure for detailed project planning and control. Abbreviated: CPM. { 'krid-ə-kəl 'pæθ ,meth-əd }

**critical phenomena** [PHYS CHEM] Physical properties of liquids and gases at the critical point (conditions at which two phases are just about to become one); for example, critical pressure is that needed to condense a gas at the critical temperature, and above the critical temperature the gas cannot be liquefied at any pressure. { 'krid-ə-kəl fə'nām-ə-nə }

**critical point** [MATH] A point at which the first derivative of a function is either 0 or does not exist. [PETRO ENG] A location on the drilling line which is subject to strain when the pipe is run into or pulled out of the drill hole. [PHYS CHEM] 1. The temperature and pressure at which two phases of a substance in equilibrium with each other become identical, forming one phase. 2. The temperature and pressure at which two ordinarily partially miscible liquids are consolute. { 'krid-ə-kəl 'pɔɪnt }

**critical potential** [ATOM PHYS] The energy needed to raise an electron to a higher energy level in an atom (resonance

## CRITICAL PATH METHOD



The critical path method for motor maintenance job, showing activities involved, duration of the activity in hours (numbers in parentheses), and how the activities dovetail together.



potential) or to remove it from the atom (ionization potential). [ELEC] A potential which results in sudden change in magnitude of the current. { 'krid-ə-kəl pə'ten-čəl }

**critical pressure** [FL MECH] For a nozzle whose cross section at each point is such that a fluid in isentropic flow just fills it, the pressure at the section of minimum area of the nozzle; if the nozzle is cut off at this point with no diverging section, decrease in the discharge pressure below the critical pressure (at constant admission pressure) does not result in increased flow. [THERMO] The pressure of the liquid-vapor critical point. { 'krid-ə-kəl 'presh-ər }

**critical-pressure ratio** [FL MECH] The ratio of the critical pressure of a nozzle to the admission pressure of the nozzle (equals 0.53 for gases). { 'krid-ə-kəl 'presh-ər, rā-shō }

**critical properties** [PHYS CHEM] Physical and thermodynamic properties of materials at conditions of critical temperature, pressure, and volume, that is, at the critical point. { 'krid-ə-kəl 'prāp-ərd-ēz }

**critical range** [MET] The temperature range for the reversible change of austenite to ferrite, pearlite, and cementite. { 'krid-ə-kəl 'rānj }

**critical ratio** [STAT] The ratio of a particular deviation from the mean value to the standard deviation. { 'krid-ə-kəl 'rā-shō }

**critical reactor** [NUCLEO] A nuclear reactor in which the ratio of moderator to fuel is either subcritical or just critical; used to study the properties of the system and determine critical size. { 'krid-ə-kəl rē'ak-tər }

**critical region** [GEN] The shortest segment of a chromosome whose gain or loss results in a particular complex phenotype such as Down syndrome. [STAT] In testing hypotheses, the set of sample values leading to rejection of the null hypothesis. { 'krid-ə-kəl 'rē-jən }

**critical Reynolds number** [FL MECH] The Reynolds number at which there is a transition from laminar to turbulent flow. { 'krid-ə-kəl 'ren-əlz, nām-bər }

**critical scattering** [PHYS] Intense scattering of some form of radiation by a substance at a temperature near a second-order transition, as in critical opalescence or critical magnetic scattering. { 'krid-ə-kəl 'skad-ər-ij }

**critical shear stress** [SOLID STATE] The shear stress needed to cause slip in a given direction along a given crystallographic plane of a single crystal. { 'krid-ə-kəl 'shir, stres }

**critical size** [NUCLEO] A set of physical dimensions for the core and reflector of a nuclear reactor at which a critical chain reaction is maintained. { 'krid-ə-kəl 'siz }

**critical slope** [CIV ENG] The maximum angle with the horizontal at which a sloped bank of soil of a given height will remain undeformed without some form of support. [HYD] The channel slope or grade that is equal to the loss of head per foot resulting from flow at a depth which will provide uniform flow at critical depth. { 'krid-ə-kəl 'slōp }

**critical solution temperature** [PHYS CHEM] The temperature at which a mixture of two liquids, immiscible at ordinary temperatures, ceases to separate into two phases. { 'krid-ə-kəl sō'lū-shən, tem-prə-čər }

**critical speed** [CRYO] See critical velocity. [FL MECH] See critical velocity. [MECH ENG] The angular speed at which a rotating shaft becomes dynamically unstable with large lateral amplitudes, due to resonance with the natural frequencies of lateral vibration of the shaft. { 'krid-ə-kəl 'spēd }

**critical state** [PHYS CHEM] Unique condition of pressure, temperature, and composition wherein all properties of coexisting vapor and liquid become identical. { 'krid-ə-kəl 'stāt }

**critical strain** [MET] The strain at which heating causes rapid growth of large grains in many metals and alloys; phase transformations do not occur. { 'krid-ə-kəl 'strān }

**critical table** [MATH] A table, usually for a function that varies slowly, which gives only values of the argument near which changes in the value of the function, as rounded to the number of decimal places displayed in the table, occur. { 'krid-ə-kəl, tā-bəl }

**critical temperature** [AGR] The temperature below which a plant cannot grow. [PHYS CHEM] The temperature of the liquid-vapor critical point, that is, the temperature above which the substance has no liquid-vapor transition. Symbolized  $T_c$ . { 'krid-ə-kəl tem-prə-čər }

**critical value** [MATH] The value of the dependent variable at a critical point of a function. [STAT] A number which

causes rejection of the null hypothesis if a given test statistic is this number or more, and acceptance of the null hypothesis if the test statistic is smaller than this number. { 'krid-ə-kəl 'val-yū }

**critical velocity** [AERO ENG] In rocketry, the speed of sound at the conditions prevailing at the nozzle throat. Also known as throat velocity. [CRYO] The velocity of a superfluid in very narrow channels (on the order of  $10^{-5}$  centimeter), which is nearly constant. Also known as critical speed. [FL MECH] 1. The speed of flow equal to the local speed of sound. Also known as critical speed. 2. The speed of fluid flow through a given conduit above which it becomes turbulent. { 'krid-ə-kəl vā'lās-əd-ē }

**critical vibration** [MECH ENG] A vibration that is significant and harmful to a structure. { 'krid-ə-kəl vī'brā-shən }

**critical voltage** [ELECTR] The highest theoretical value of steady anode voltage, at a given steady magnetic flux density, at which electrons emitted from the cathode of a magnetron at zero velocity would fail to reach the anode. Also known as cutoff voltage. { 'krid-ə-kəl 'vōl-tij }

**critical volume** [PHYS] The volume occupied by one mole of a substance at the liquid-vapor critical point, that is, at the critical temperature and pressure. { 'krid-ə-kəl 'vāl-yəm }

**critical wavelength** [COMMUN] The free-space wavelength corresponding to the critical frequency. { 'krid-ə-kəl 'wāv, lēŋkth }

**critical weight** [ENG] In a drilling operation, the weight placed on a bit that will cause the drill string to become resonant with the angular speed at which the rotating shaft is operating. { 'krid-ə-kəl 'wāt }

**critical zone** [FL MECH] In fluid flow, the area on a graph of the Reynolds number versus friction factor indicating unstable flow (Reynolds number 2000 to 4000) between laminar flow and the transition to turbulent flow. [ORD] Area over which a bombing plane in horizontal-flight or glide bombing must maintain straight flight so that the bombsight can be operated properly and bombs dropped accurately. { 'krid-ə-kəl 'zōn }

**crivetz** [METEOROL] A wind blowing from the northeast quadrant in Rumania and southern Russia, especially a cold borallike wind from the north-northeast, characteristic of the climate of Rumania. { krə'vets }

**CRLAS** See cavity ringdown laser absorption spectroscopy.

**CR law** [ELEC] A law which states that when a constant electromotive force is applied to a circuit consisting of a resistor and capacitor connected in series, the time taken for the potential on the plates of the capacitor to rise to any given fraction of its final value depends only on the product of capacitance and resistance. { 'sē'lār, lō }

**CRM** See chemical remanent magnetization.

**CRO** See cathode-ray oscilloscope.

**Crocco's equation** [FL MECH] A relationship, expressed as  $v \times \omega = -T \text{ grad } S$ , between vorticity and entropy gradient for the steady flow of an inviscid compressible fluid;  $v$  is the fluid velocity vector,  $\omega (= \text{curl } v)$  is the vorticity vector,  $T$  is the fluid temperature, and  $S$  is the entropy per unit mass of the fluid. { 'krä,kōz i'kwā-zhən }

**crochet file** [DES ENG] A thin, flat, round-edged file that tapers to a point. { krō'shā, fil }

**crocidolite** [MINERAL] A lavender-blue, indigo-blue, or leek-green asbestiform variety of riebeckite; occurs in fibrous, massive, and earthy forms. Also known as blue asbestos; krokidolite. { krō'sid-əl, it }

**Crockett magnetic separator** [MIN ENG] An assembly consisting of a continuous belt submerged in a tank through which ore pulp flows; magnetic solids adhere to the belt, which has a series of flat magnets attached to it, and the solids are dragged clear. { 'kräk-ət mag'ned-ik 'sep-ə,rād-ər }

**crocking** [TEXT] Rubbing off of color as a result of improper dyeing, poor penetration, or poor fixation. { 'kräk-ij }

**crocodile** [ELEC] A unit of potential difference or electromotive force, equal to  $10^6$  volts; used informally at some nuclear physics laboratories. [VERT ZOO] The common name for about 12 species of aquatic reptiles included in the family Crocodylidae. { 'kräk-ə,dīl }

**crocodile clip** See alligator clip. { 'kräk-ə,dīl, klip }

**crocodile shears** See lever shears. { 'kräk-ə,dīl, shīrz }

**Crocodylia** [VERT ZOO] An order of the class Reptilia which is composed of large, voracious, aquatic species, including

---

# **The New Oxford American Dictionary**

---

EDITED BY

Elizabeth J. Jewell  
Frank Abate

**OXFORD**  
UNIVERSITY PRESS  
2001



OXFORD  
UNIVERSITY PRESS

New York Oxford

Athens Auckland Bangkok Bogotá Buenos Aires Cape Town  
Chennai Dares Salaam Delhi Florence Hong Kong Istanbul Karachi  
Kolkata Kuala Lumpur Madrid Melbourne Mexico City Mumbai Nairobi  
Paris São Paulo Singapore Taipei Tokyo Toronto Warsaw

and associated companies in  
Berlin Ibadan

The *New Oxford American Dictionary* is based on the *New Oxford Dictionary of English*, published in the United Kingdom in 1998.

Copyright © 2001 by Oxford University Press, Inc.

Published by Oxford University Press, Inc.,  
198 Madison Avenue,  
New York, New York 10016

[www.oup-usa.org](http://www.oup-usa.org)  
[www.askoxford.com](http://www.askoxford.com)

Oxford is a registered trademark of Oxford University Press.  
All rights reserved. No part of this publication may be reproduced,  
stored in a retrieval system, or transmitted in any form or by any means,  
electronic, mechanical, photocopying, recording, or otherwise, without  
the prior permission of Oxford University Press.

Library of Congress Cataloging in Publication Data  
Data available  
ISBN 0-19-511227-X (thumb index)

This book includes some words that are, or are asserted to be, proprietary names or trademarks. Their inclusion does not imply that they have acquired for legal purposes a nonproprietary or general significance, nor is any other judgment implied concerning their legal status. In cases where the editor has some evidence that a word is used as a proprietary name or trademark, this is indicated by the designation trademark, but no judgment concerning the legal status of such words is made or implied thereby.

10 9 8 7 6 5 4 3 2 1

Printed in the United States of America on acid-free paper



## crisis

405

Croatia

**-ORIGIN** Old English: from two words, *crypel* and *cræpel*, both of Germanic origin and related to **CREEP**.  
**USAGE** The word **cripple** has long been in use to refer to 'a person unable to walk due to illness or disability' and is recorded as early as AD 950. In the 20th century, the term acquired offensive connotations and has now been largely replaced by broader terms such as 'disabled person.'

**crisis** |'krisis| **n.** (pl. **crises** |-,seɪz|) a time of intense difficulty, trouble, or danger: *the current economic crisis* | a family in crisis | a crisis of semiliteracy among high school graduates.

■ a time when a difficult or important decision must be made: [as adj.] a crisis point of history. ■ the turning point of a disease when an important change takes place, indicating either recovery or death. ■ the point in a play or story when a crucial conflict takes place, determining the outcome of the plot.

**-ORIGIN** late Middle English (denoting the turning point of a disease): medical Latin, from Greek *krisis* 'decision,' from *krinein* 'decide.' The general sense 'decisive point' dates from the early 17th cent.

**crisis center** **n.** a facility, telephone answering system, etc., where individuals going through personal crises can obtain help or advice.

■ an office or agency that serves as a clearinghouse for information and coordinates action during an emergency or disaster.

**crisis management** **n.** the practice of taking managerial action only when a crisis has developed.

**crisp** |krisp| **adj.** 1 (of a substance) firm, dry, and brittle, esp. in a way considered pleasing or attractive: *crisp bacon* | the snow is lovely and crisp.

■ (of a fruit or vegetable) firm, indicating freshness: *crisp lettuce*. ■ (of the weather) cool, fresh, and invigorating: *a crisp autumn day*. ■ (of paper or cloth) smoothly and attractively stiff and uncreased: *a crisp \$5 bill*. ■ (of hair) having tight curls, giving an impression of rigidity.

2 (of a way of speaking or writing) briskly decisive and matter-of-fact, without hesitation or unnecessary detail: *they were cut off with a crisp "Thank you."*

**n.** 1 a dessert of fruit baked with a crunchy topping of brown sugar, butter, and flour: *rhubarb crisp*.

2 (also **potato crisp**) British term for **POTATO CHIP**.

**v.** [trans.] give (something, esp. food) a crisp surface by placing it in an oven or grill: *crisp the pita rounds in the oven*.

■ [intrans.] (of food) acquire a crisp surface in this way: *open the foil so that the bread browns and crisps*. ■ archaic curl into short, stiff, wavy folds or crinkles.

**-PHRASES** burn something to a crisp burn something completely, leaving only a charred remnant.

**-DERIVATIVES** **crispily** **adv.**; **crispness** **n.**

**-ORIGIN** Old English (referring to hair in the sense 'curly'): from Latin *crispus* 'curled.' Other senses may result from symbolic interpretation of the sound of the word.

**crispate** |'kris,pat; -pət| **adj.** Botany (esp. of a leaf) having a wavy or curly edge.

**-ORIGIN** mid 19th cent.: from Latin *crispatus*, past participle of *crispare* 'to curl.'

**crisper** |'krispə| **n.** a compartment at the bottom of a refrigerator for storing fruit and vegetables.

**crispy** |'krispeɪ| **adj.** (crispier, crispest) (of food, typically cooked food) having a pleasantly firm, dry, and brittle surface or texture: *crispy fried bacon*.

**-DERIVATIVES** **crispiness** **n.**

**crissal thrasher** |'krisəl| **n.** a large gray thrasher (songbird) with a red patch under the tail, found in the southwestern US and Mexico.

**-ORIGIN** late 19th cent.: *crissal* from modern Latin *crissum* (denoting the vent region of a bird) + **-AL**.

**criss-cross** |'kris,krɒs| **n.** a pattern of intersecting straight lines or paths: *the crisscross of wrinkles on his face*.

**adj.** (of a pattern) containing a number of straight lines or paths that intersect each other: *the streets ran in a regular crisscross pattern*.

**adv.** in a pattern of intersecting straight lines: *the swords were strung crisscross on his back*.

**v.** [trans.] (usu. **be crisscrossed**) form a pattern of intersecting lines or paths on (a place): *the green hill was crisscrossed with a network of sheep tracks*.

■ [intrans.] (of straight lines or paths) intersect repeatedly: *the smaller streets crisscrossed in a grid pattern*.

■ move or travel around (a place) by going back and forth repeatedly: *the President crisscrossed America*.

**-ORIGIN** early 17th cent. (denoting a figure of a cross preceding the alphabet in a hornbook): from *Christ-cross* (in the same sense in late Middle English), from *Christ's cross*. The form was later treated as a reduplication of **CROSS**.

**crista** |'kristə| **n.** (pl. **cristae** |-,teɪ; -,tɪ|) 1 Anatomy & Zoology a ridge or crest.

2 Biology each of the partial partitions in a mitochondrion formed by infolding of the inner membrane.

**-DERIVATIVES** **cristate** |'kris,tat| **adj.**

**-ORIGIN** mid 19th cent.: from Latin, 'tuft, plume, crest.'

**cristobalite** |kri'stəbə,lɪt| **n.** a form of silica that is the main component of opal and also occurs as small octahedral crystals.

**-ORIGIN** late 19th cent.: named after Cerro San Cristóbal in Mexico, where it was discovered, + **-ITE**.

**crit** |kri:t| **n.** informal short for **CRITICISM** or **CRITIC**.

**criticism** |kri'tɪsɪzəm| **n.** (pl. **criticisms** |-'tɪrɪz|) a principle or standard by which something may be judged or decided: *the launch came too close to violating safety criteria*.

**-DERIVATIVES** **critic** |kri'tɪk| **n.**

**-ORIGIN** early 17th cent.: from Greek *kritērion* 'means of judging,' from *kritēs* (see **CRITIC**).

**USAGE** Strictly speaking, the singular form (following the original Greek) is **criticism** and the plural form is **criticisms**. It is a common mistake, however, to use **criticisms** as if it were a singular, as in *a further criticism needs to be considered*.

**critérium** |kri'tɪrɪəm| **n.** a one-day bicycle race on a circuit road course.

**critic** |'kri:tɪk| **n.** 1 a person who expresses an unfavorable opinion of something: *critics say many schools are not prepared to handle the influx of foreign students*.

2 a person who judges the merits of literary, artistic, or musical works, esp. one who does so professionally: *a film critic*.

**-ORIGIN** late 16th cent.: from Latin *criticus*, from Greek *kritikos*, from *kritēs* 'a judge,' from *krinein* 'judge, decide.'

**critical** |'kri:tɪkəl| **adj.** 1 expressing adverse or disapproving comments or judgments: *he was critical of many US welfare programs*.

2 expressing or involving an analysis of the merits and faults of a work of literature, music, or art: *she never won the critical acclaim she sought*.

■ (of a published literary or musical text) incorporating a detailed and scholarly analysis and commentary: *a critical edition of a Bach sonata*.

3 (of a situation or problem) having the potential to become disastrous; at a point of crisis: *the flood waters had not receded, and the situation was still critical*.

■ (of a person) extremely ill and at risk of death: *he had been in critical condition since undergoing surgery*.

■ having a decisive or crucial importance in the success or failure of something: *temperature is a critical factor in successful fruit storage*.

4 [attrib.] Mathematics & Physics relating to or denoting a point of transition from one state to another.

■ (of a nuclear reactor or fuel) maintaining a self-sustaining chain reaction: *the reactor is due to go critical in October*.

**-DERIVATIVES** **critically** |kri'tɪkəlɪ| **n.** (in senses 3 and 4); **critically** |kri'tɪk(ə)lɪ| **adv.** [as submodifier] *he's critically ill*; **criticalness** **n.**

**-ORIGIN** mid 16th cent. (in the sense 'relating to the crisis of a disease'): from late Latin *criticus* (see **CRITIC**).

**critical angle** **n.** Optics the angle of incidence beyond which rays of light passing through a denser medium to the surface of a less dense medium are no longer refracted but totally reflected.

**critical apparatus** **n.** see **APPARATUS** (sense 3).

**critical damping** **n.** Physics damping just sufficient to prevent oscillations.

**critical list** **n.** [in sing.] a list of those who are critically ill in hospital.

**critical mass** **n.** Physics the minimum amount of fissile material needed to maintain a nuclear chain reaction.

■ figurative the minimum size or amount of something required to start or maintain a venture: *a communication system is of no value unless there is a critical mass of users*.

**critical path** **n.** the sequence of stages determining the minimum time needed for an operation, esp. when analyzed on a computer for a large organization.

**critical path analysis** **n.** the mathematical network analysis technique of planning complex working procedures with reference to the critical path of each alternative system.

**critical period** **n.** Psychology a period during someone's development in which a particular skill or characteristic is believed to be most readily acquired.

**critical point** **n.** 1 Chemistry a point on a phase diagram at which both the liquid and gas phases of a substance have the same density, and are therefore indistinguishable.

2 Mathematics a point on a curve where the gradient is zero.

**critical pressure** **n.** Chemistry the pressure of a gas or vapor in its critical state.

**critical state** **n.** Chemistry the state of a substance when it is at the critical point, i.e., at critical temperature and pressure.

**critical temperature** **n.** Chemistry the temperature of a gas or vapor in its critical state. Above this temperature, a gas cannot be liquefied by pressure alone.

**critical theory** **n.** a philosophical approach to culture, and esp. to literature, that seeks to confront the social, historical, and ideological forces and structures that produce and constrain it. The term is applied particularly to the work of the Frankfurt School.

**critical volume** **n.** Chemistry the volume occupied by a unit mass of a gas or vapor in its critical state.

**criticaster** |'kri:tə,kæstə| **n.** rare a minor or inferior critic.

**-ORIGIN** late 17th cent.: from **CRITIC** + **-ASTER**.

**criticism** |kri'tɪsɪzəm| **n.** 1 the expression of disapproval of someone or something based on perceived faults or mistakes: *he received a lot of criticism | he ignored the criticisms of his friends*.

2 the analysis and judgment of the merits and faults of a literary or artistic work: *alternative methods of criticism supported by well-developed literary theories*.

■ an article, book, or comment containing such analysis: *I only read poetry and criticism*. ■ the scholarly investigation of literary or historical texts to determine their origin or intended form.

**-ORIGIN** early 17th cent.: from **CRITIC** or Latin *criticus* + **-ISM**.

**criticize** |'kri:tɪsaɪz| **v.** [trans.] 1 indicate the faults of (someone or something) in a disapproving way: *they criticized the failure of Western nations to adequately resettle Indochinese refugees | technicians were criticized for defective workmanship*.

2 form and express a sophisticated judgment of (a literary or artistic work): *a literary text may be criticized on two grounds: the semantic and the expressive*.

**-DERIVATIVES** **criticizable** **adj.**; **criticizer** **n.**

**critique** |kri'tek| **n.** a detailed analysis and assessment of something, esp. a literary, philosophical, or political theory.

**v.** [critiques, critiqued, critiquing] [trans.] evaluate (a theory or practice) in a detailed and analytical way: *the authors critique the methods and practices used in the research*.

**-ORIGIN** mid 17th cent. (as a noun): from French, based on Greek *kritikḗ tekhnḗ* 'critical art.'

**critter** |'kri:tə| **n.** informal dialect a living creature; an animal.

■ [usu. with **adj.**] a person of a particular kind: *the old critter used to live in a shack*.

**-ORIGIN** early 19th cent.: variant of **CREATURE**.

**croak** |krɒk| **n.** a deep hoarse sound made by a frog or a crow.

■ a sound resembling this, esp. one made by a person: *Lorton tried to laugh—it came out as a croak*.

**v.** [intrans.] 1 (of a frog or crow) make a characteristic deep hoarse sound.

■ (of a person) make a similar sound when speaking or laughing: [with direct speech] *"Thank you," I croaked*. ■ archaic prophesy evil or misfortune, esp. unjustifiably and to the irritation of others: *without croaking, it may be observed that our government is upon a dangerous experiment*.

2 informal die: *the dog finally croaked in 1987*.

■ [trans.] kill (someone): *Scissors Haggerty's mob croaked two messengers*.

**-ORIGIN** Middle English (as a verb): imitative.

**croaker** |'krɒkə| **n.** 1 an animal or fish that makes a deep, hoarse sound.

■ another term for **DRUM**.

2 archaic a person who habitually prophesies evil or misfortune unjustifiably and to the irritation of others.

**croaky** |'krɒkeɪ| **adj.** (croakier, croakiest) (of a person's voice) deep and hoarse.

**-DERIVATIVES** **croakily** |-'kɒleɪ| **adv.**

**Croat** |'krəʊt; -krɒt; -krɔ:t| **n.** 1 a native or national of Croatia, or a person of Croatian descent.

2 the South Slavic language of the Croats, almost identical to Serbian but written in the Roman alphabet. See **SERBO-CROAT**.

**adj.** of or relating to the Croats or their language.

**-ORIGIN** from modern Latin *Croatae* (plural), from Serbo-Croat *Hrvat*.

**Croatia** |krə'ʃi:ə| a country in southeastern Europe, formerly a constituent republic of Yugoslavia; pop. 4,760,000; capital, Zagreb; language, Croatian. Croatian name **HRVATSKA**.

See page xxxviii for the Key to Pronunciation





RANDOM HOUSE  
WEBSTER'S

*college  
dictionary*  
*with CD-ROM*

RANDOM HOUSE  
REFERENCE

NEW YORK TORONTO LONDON SYDNEY AUCKLAND

*Random House Webster's College Dictionary*  
Copyright © 2001 by Random House, Inc.

All rights reserved. No part of this book may be reproduced in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher. All inquiries should be addressed to Random House Reference, Random House, Inc., 1745 Broadway, New York, NY, 10019. Published in the United States by Random House, Inc., New York and simultaneously in Canada by Random House of Canada Limited.

The first Random House college dictionary, the *American College Dictionary*, was published in 1947 to critical acclaim. The first edition of the *Random House Webster's College Dictionary* was published in 1991. Subsequent revisions were published in 1992, 1995, and 1996. A second, completely redesigned, revised, and updated edition was published in 1997, with updates copyright ©2005, 2001, 2000, 1999, 1998, 1996, 1995, 1992, 1991 by Random House, Inc.

New words edited by Barbara Ann Kipfer, Dictionary.com Managing Editor, Lexico Publishing Group.

#### **Trademarks**

A number of entered words which we have reason to believe constitute trademarks have been designated as such. However, no attempt has been made to designate as trademarks or service marks all words or terms in which proprietary rights might exist. The inclusion, exclusion, or definition of a word or term is not intended to affect, or to express a judgment on, the validity or legal status of the word or term as a trademark, service mark, or other proprietary term.

Please address inquiries about electronic licensing of reference products, for use on a network or in software or on CD-ROM, to the Subsidiary Rights Department, Random House Reference, fax 212-572-6003.

This book is available for special discounts for bulk purchases for sales promotions or premiums. Special editions, including personalized covers, excerpts of existing books, and corporate imprints, can be created in large quantities for special needs. For more information, write to Random House, Inc., Special Markets/Premium Sales, 1745 Broadway, MD 6-2, New York, NY, 10019 or e-mail [specialmarkets@randomhouse.com](mailto:specialmarkets@randomhouse.com).

#### **Library of Congress Cataloging-in-Publication Data**

Random House Webster's college dictionary

p. cm.

ISBN 0-375-42600-0

1. English language--Dictionaries. I. Random House (Firm)

PE1628.R28 1999

423--DC21

99-12620

CIP

Visit the Random House Reference Web site at [www.randomwords.com](http://www.randomwords.com)

Typeset and Printed in the United States of America

2001 Second Revised and Updated Random House Edition

9 8 7 6 5 4 3 2 1



**OFFENSE** is used of a less serious violation of a public law, or of a violation of a social or moral rule: a traffic offense; an offense against property. **SIN** means a breaking of a moral or divine law: the sin of envy.

**crime/** against/ **human/ity**, *n.* a crime, as genocide, directed against a people or group solely because of their race, religion, national origin, political beliefs, sexual orientation, etc. [1940-45]

**Crime/an War/**, *n.* a war involving Great Britain, France, Turkey, and Sardinia against Russia, fought chiefly in the Crimea 1853-56

**crim-i-nal** (krim'ə nəl), *adj.* 1. of the nature of or involving crime 2. guilty of crime 3. dealing with crime or its punishment: a criminal proceeding 4. senseless, foolish: a criminal waste of food 5. exorbitant: outrageous criminal prices —*n.* 6. a person convicted of a crime [1350-1400, ME < AF < L *crimīnālis* = L *crimīn-*, *s.* of *crimen* CRIME + *-ālis* -AL-] —**crim/i-nal-ly**, *adv.* —**Syn.** See **LEGAL**.

**crim/inal court/**, *n.* a court of law in which criminal cases are tried and determined [1590-1600]

**crim-i-nal-is-tics** (krim'ə nəl'is'tiks), *n.* (used with *a* sing. *v.*) the scientific evaluation of physical evidence in criminal cases. [1945-50]

**crim-i-nal-i-ty** (krim'ə nəl'i tē), *n.* *pl.* -ties. 1. the state of being criminal 2. a criminal act or practice. [1605-15; < ML]

**crim-i-nal-ize** (krim'ə nəl'iz'), *v.t.* -ized, -izing. 1. to make criminal 2. to make a criminal of [1955-60] —**crim/i-nal-i-za/tion**, *n.*

**crim/inal law/**, *n.* the body of laws dealing with criminal offenses and their punishment. [1580-90] —**crim/inal law/yer**, *n.*

**crim-i-nate** (krim'ə nāt'), *v.t.* -nated, -nating. to incriminate. [1635-45; < L *crimīnātus*, *ptp.* of *crimīnari* to accuse. See CRIME, -ATE] —**crim/i-na/tion**, *n.* —**crim/i-na/tor**, *n.*

**criminol.**, 1. criminologist 2. criminology.

**crim-i-nol-o-gy** (krim'ə nəl'ə jē), *n.* the sociological study of crime and criminals. [1855-60; < L *crimīn-*, *s.* of *crimen* (see CRIME) + *-o-* + *-logi*] —**crim/i-nol/o-gi-cal** (-nəl'ə jē kəl), *adj.* —**crim/i-nol/o-gi-cal-ly**, *adv.* —**crim/i-nol/o-gist**, *n.*

**crimp** (krimp), *v.t.* 1. to press into small regular folds; make wavy. 2. to curl (hair), esp. with a curling iron. 3. to seal by pressing together. 4. to restrain or hinder. 5. to corrugate (sheet metal, cardboard, etc.). 6. to bend (leather) into shape. 7. to fold the edges of (sheet metal) to make a lock seam. —*n.* 8. the act of crimping. 9. a crimped condition or form. 10. *Usu.*, **crimps**. waves or curls, esp. in hair that has been crimped. 11. the waviness of a fiber, either natural, as in sheep wool, or produced by weaving, plaiting, or other processes 12. a crease formed in sheet metal or plate metal to make the material less flexible or for fastening purposes. —**Idiom.** 13. **put a crimp in**, to interfere with; hinder. [1350-1400, ME *crimpen*, OE *gescrympan* to curl, der. of *crump* crooked] —**crimp/er**, *n.*

**crimp** (krimp), *Archaic.* —*n.* 1. a person engaged in enlisting sailors, soldiers, etc., by persuasion, swindling, or coercion. —*v.t.* 2. to enlist (sailors, soldiers, etc.) by such means. [1630-40; perh. **CRIMP**]

**crimpy** (krim'pē), *adj.* **crimpy-er**, **crimpy-est**. frizzy. [1885-90]

**crim-son** (krim'zən, -sən), *adj.* 1. deep purplish red. —*n.* 2. a crimson color, pigment, or dye. —*v.t.* *v.t.* 3. to make or become crimson. [1375-1425, < ML *crimesinus* < Ar *qirmizi* (*qirmiz* KERMES + *-i* suffix of appurtenance) + L *-inus* -INE-] —**crim/son-ness**, *n.*

**cringe** (krinj), *v.* **cringed**, **cring-ing**, *n.* —*v.t.* 1. to shrink or crouch, esp. in fear or servility; cower. 2. to fawn; toady. —*n.* 3. servile or fawning deference. [1175-1225; ME *crengen*, *crenchen* (transit.); OE *\*crencean*, *crencegan*, causative of *crengan*, *crencan* to yield, fall (in battle), *c.* OFris *krenza*, D *krenge* to keel over] —**cring/er**, *n.* —**cring/ing-ly**, *adv.* —**cring/ing-ness**, *n.*

**crin-gle** (kring'gəl), *n.* an eye or grommet on the boltrope of a sail to which a line is attached. [1620-30; < LG *kringel* = *kring* circle + *-el* dim. suffix; *c.* ME *Cringle* (in place names), ON *kringla* circle]

**crin-kle** (kring'kal), *v.* -kled, -kling, *n.* —*v.t.* *v.t.* 1. to wrinkle, ripple. 2. to make or cause to make slight, sharp sounds; rustle. 3. to bend or twist. —*n.* 4. a wrinkle or ripple. 5. a crinkling sound. 6. a turn or twist. [1350-1400; ME; akin to OE *crincan* to bend, yield, D *krinkelen* to crinkle; see **CRINGE**, -LE] —**crin/kly**, *adj.* —**-kly-er**, **-kly-est**.

**cri-noid** (kri'noid, krim'oid), *n.* 1. any echinoderm of the class Crinoidea, having a cup-shaped body with branched radiating arms, comprising the sea lilies and feather stars. —*adj.* 2. lilylike. [1825-35; < Gk *krinoeidēs* = *krin*(on) lily + *-eoidēs* -oin] —**cri-noi/dal**, *adj.*

**crin-o-line** (krin'li in), *n.* 1. a stiff, coarse fabric, often of cotton, used as interlining or for support in garments, hats, etc. 2. a petticoat of crinoline or other stiff material worn to bell out an overskirt. 3. a hoop skirt. [1820-30; < F < It *crinolino* = *crino* horsehair (< L *crinis* hair) + *lino* flax < L *linum*, cf. **LINEN**]

**cri-ol-i-to** (krē ð'lo, -ð'yō, -ð'i'yō), *n.* *pl.* -ol-i-to, *adj.* —*n.* 1. a person born in Spanish America but of European, usu. Spanish, ancestry. 2. a domestic animal of any of several strains or breeds developed in Latin America. —*adj.* 3. native; indigenous. [1905-10; < Sp; see **Cae-ole**]

**cripes** (krips), *interj.* (used as a mild oath or an exclamation of astonishment.) [1905-10; appar. euphemistic alter. of **CHRIST**]

**cripple** (krip'al), *n.* *v.* -pled, -pling. —**Usage.** The term **CRIPPLE** in the sense of "a lame or disabled person" is usually perceived as offensive and is not used very often nowadays. The noun **CRIPPLE** and the adjective **CRIPPLED** have largely been replaced by the neutral term **(THE) HANDICAPPED** or by the more recent and increasingly common term **(THE) DISABLED**. The adjectives **CHALLENGED** and **SPECIAL** are preferred by some people but are often ridiculed as euphemisms. **CRIPPLE** in the sense of "a person who is disabled in any way" is used in phrases such as *mental cripple*, *emotional cripple*, and *social cripple*.

## crime against humanity to criticism

—*n.* 1. *Usu.* **Offensive**. a lame or disabled person or animal. 2. a person who is disabled in any way: a mental cripple 3. something impaired or flawed —*v.t.* 4. to make a cripple of, lame 5. to disable; impair [bef. 950, ME *cripel*, OE *cripel*, akin to **CRIB**] —**crip/plier**, *n.* —**crip/pling-ly**, *adv.*

**cri-sis** (kri'sis), *n.* *pl.* -ses (sēz) 1. a turning point, as in a sequence of events, for better or for worse 2. a condition of instability, as in international relations, that leads to a decisive change 3. a personal tragedy, emotional upheaval, or the like 4. a. the point in the course of a serious disease at which a decisive change occurs, leading to recovery or to death. b. the change itself 5. the point, as in a play, at which the antagonistic elements confront each other [1375-1425, late ME < L < Gk *krisis* decision = *kri-* var. *s.* of *krihein* to decide, separate + *-sis* -sis]

**cri/sis cen/ter**, *n.* a facility that operates a telephone service from which people may obtain informed help and advice in a personal crisis. [1970-75]

**cri/sis man/agement**, *n.* the techniques used, as by an employer or government, to avert or deal with crisis situations, as strikes, riots, or violence. [1960-65] —**cri/sis man/ager**, *n.*

**crisp** (krisp), *adj.* **crisp-er**, **crisp-est**, *v.* —*adj.* 1. hard but easily breakable, brittle: *crisp crackers* 2. firm and fresh: *crisp lettuce* 3. brisk, clear: a *crisp reply* 4. clean-cut, well-groomed 5. bracing, invigorating: *crisp weather* 6. (of hair) lying in small, stiff curls —*v.t.* *v.t.* 7. to make or become crisp 8. to curl. —*n.* 9. *Brit.* **POTATO CHIP** 10. a dessert of apples or other fruit baked with a crunchy topping of crumbs, sugar, etc. [bef. 900, ME, OE < L *crispus* curled] —**crisp/ly**, *adv.* —**crisp/ness**, *n.*

**crisp-en** (kris'pən), *v.t.* *v.t.* to make or become crisp. [1940-45]

**crisp-er** (kris'pər), *n.* a drawer or compartment in a refrigerator for keeping lettuce, celery, and other vegetables crisp. [1825-35; **CRISP** + *-er*]

**crisp-y** (kris'pē), *adj.* **crisp-i-er**, **crisp-i-est**. *crisp* [1350-1400] —**crisp/i-ly**, *adv.* —**crisp/i-ness**, *n.*

**criss-cross** (kris'krōs', -krōs'), *v.t.* 1. to move back and forth over. 2. to mark with crossing lines. —*v.i.* 3. to pass back and forth; be arranged in a crisscross pattern. —*adj.* 4. Also, **criss/crossed**, having many crossing lines, paths, or the like —*n.* 5. a crisscross mark, pattern, etc. —*adv.* 6. in a crisscross manner; crosswise. [1810-20; alter. of *christcross* figure of a cross]

**cris-sum** (kris'am), *n.* *pl.* **cris-sa** (kris'a) 1. the region surrounding the cloacal opening beneath the tail of a bird 2. the feathers of this region collectively. [1870-75; < NL, der. of L *crissare* to move the haunches] —**cris/sal**, *adj.*

**cris-ta** (kris'ta), *n.* *pl.* -tae (-tē). *Anat.*, *Zool.* a crest or ridge. [1840-50; < L: a **CREST**, tuft, comb]

**crit.**, 1. critic 2. criticism 3. criticized.

**cri-te-ri-on** (kri tēr'ē ən), *n.* *pl.* -te-ri-a (-tēr'ē ə), -te-ri-ons. a standard of judgment or criticism; a rule or principle for evaluating or testing something. [1605-15; < Gk *kritērōn* a standard = *kri-* var. *s.* of *krihein* to separate, decide + *-tērōn* neut. suffix of means (akin to L *tōrium* -tory-)] —**cri-te-ri-al**, *adj.* —**Usage.** Like some other nouns borrowed from the Greek, **CRITERION** has both a Greek plural, **CRITERIA**, and a plural formed on the English pattern, **CRITERIONS**. The plural in *-a* occurs with far greater frequency: *These are the criteria for the selection of candidates*. Although **CRITERIA** is sometimes used as a singular, esp. in speech, it is most often used as a plural in Standard English. See also **MEDIA**, **PHENOMENON**.

**crit-ic** (krit'ik), *n.* 1. a person who judges, evaluates, or criticizes. 2. a person who evaluates, analyzes, or judges literary or artistic works, dramatic or musical performances, etc., as for a newspaper. 3. a person who tends too readily to find fault or make harsh judgments; faultfinder. 4. *Archaic.* a. **criticism**. b. **critique**. [1575-85; < L *criticus* < Gk *kritikós* skilled in judging (adj.), critic (n.) = *kritēs* judge, umpire (*kri*(nein) to separate, decide + *-tes* agent suffix) + *-ikos* -ic]

**crit-i-cal** (krit'i kal), *adj.* 1. inclined to find fault or to judge severely. 2. occupied with or skilled in criticism. 3. involving or requiring skillful judgment as to truth, merit, etc. 4. of or pertaining to critics or criticism: *critical essays* 5. providing textual variants, proposed emendations, etc.: *a critical edition of Chaucer* 6. caused by or constituting a crisis: *a critical shortage of food* 7. of decisive importance; crucial 8. of essential importance; indispensable: *a critical ingredient* 9. (of a patient's condition) having unstable and abnormal vital signs and one or more unfavorable indicators. 10. *Physics.* a. pertaining to a state, value, or quantity at which one or more properties of a substance or system change. b. of a quantity of fissionable material large enough to sustain a chain reaction. [1580-90] —**crit/i-cal-ly**, *adv.* —**crit/i-cal-i-ty**, *n.* —**crit/i-cal-ness**, *n.*

**crit/i-cal an-gle**, *n.* 1. the minimum angle of incidence beyond which total internal reflection occurs for light traveling from a medium of higher to one of lower index of refraction. 2. the angle of attack at which a sudden change in airflow occurs around the wings of an aircraft, reducing lift and increasing drag. [1870-75]

**crit/i-cal mass/**, *n.* 1. the amount of a given fissionable material necessary to sustain a chain reaction. 2. an amount necessary or sufficient to have a significant effect or to achieve a result. [1940-45]

**crit/i-cal point/**, *n.* the point at which a substance in one phase, as the liquid, has the same density, pressure, and temperature as in another phase, as the gaseous. [1875-80]

**crit-i-cas-ter** (krit'i kas'tər), *n.* an incompetent critic. [1675-85]

**crit-i-cism** (krit'a siz'am), *n.* 1. an act of passing judgment as to the

Webster's  
Third  
New International  
Dictionary  
OF THE ENGLISH LANGUAGE  
UNABRIDGED

*Merriam-Webster*  
REG. U.S. PAT. OFF.

*Utilizing all the experience and resources of more than  
one hundred years of Merriam-Webster® dictionaries*

EDITOR IN CHIEF  
PHILIP BABCOCK GOVE, Ph.D.  
AND  
THE MERRIAM-WEBSTER  
EDITORIAL STAFF



MERRIAM-WEBSTER INC., *Publishers*  
SPRINGFIELD, MASSACHUSETTS, U.S.A.





**A GENUINE MERRIAM-WEBSTER**

The name *Webster* alone is no guarantee of excellence. It is used by a number of publishers and may serve mainly to mislead an unwary buyer.

*Merriam-Webster™* is the name you should look for when you consider the purchase of dictionaries or other fine reference books. It carries the reputation of a company that has been publishing since 1831 and is your assurance of quality and authority.

COPYRIGHT © 2002 BY MERRIAM-WEBSTER, INCORPORATED

WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY  
PRINCIPAL COPYRIGHT 1961

Library of Congress Cataloging in Publication Data  
Main entry under title:

Webster's third new international dictionary of the English language,  
unabridged: a Merriam-Webster/editor in chief, Philip Babcock Gove  
and the Merriam-Webster editorial staff.

p. cm.  
ISBN 978-0-87779-201-7 (buckram)  
I. English language—Dictionaries. I. Gove, Philip Babcock,  
1902–1972. II. Merriam-Webster, Inc.  
PE1625.W36 1993  
423-dc20

*All rights reserved. No part of this book covered by the copyrights hereon  
may be reproduced or copied in any form or by any means—graphic,  
electronic, or mechanical, including photocopying, taping, or information  
storage and retrieval systems—without written permission of the publisher.*

MADE IN THE UNITED STATES OF AMERICA

55 56 57 QKY 09 08 07



